

Consulting
Engineers and
Scientists

MassDEP RTN 3-23246

Release Abatement Measure Plan

50 Tufts Street, Somerville, Massachusetts

Submitted to:

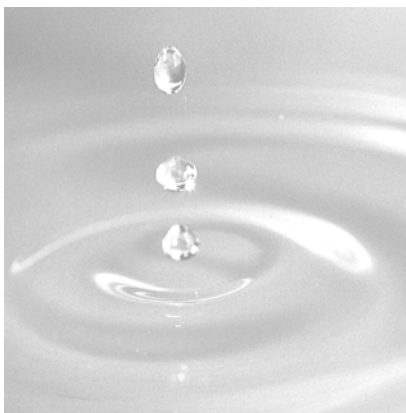
Massachusetts Department of Environmental Protection
Northeast Regional Office
150 Presidential Way
Woburn, MA 01801

Submitted by:

GEI Consultants, Inc.
400 Unicorn Park Drive
Woburn, MA 01801
781-721-4000

June 19, 2023

Project 045163



Christopher Coner, CHMM
Project Manager

Ileen S. Gladstone, P.E., LSP, LEED AP
Senior Vice President

Table of Contents

Executive Summary	iii
1. Introduction	1
1.1 Purpose	1
1.2 Submittals	1
1.3 Public Involvement	1
1.4 Background	1
1.5 Project Description	2
1.6 Contact Information (310 CMR 40.0444[1][a])	2
2. Description of Release, Site Conditions, and Surrounding Receptors (310 CMR 40.0444[1][b])	3
2.1 Release Description	3
2.1.1 50 Tufts Street	3
2.1.2 10 Morton Street	3
2.1.3 Site Conditions	4
2.2 Surrounding Receptors	4
2.3 2023 Sub-Slab Soil Vapor Sampling	5
2.4 2023 Soil Sample from Beneath Slab	5
3. Evaluation of Contemplated Site Activities and/or Use Changes (310 CMR 40.1080)	6
3.1 Requirement for an Activity and Use Limitation (AUL)	6
3.2 Contemplated Change in Site Activities and Uses	6
3.3 LSP Evaluation Opinion	7
4. RAM Objectives, Plan, and Schedule (310 CMR 40.0444[1][c])	8
4.1 Objectives	8
4.2 Planned RAM Activities	8
4.3 Activities Outside the Scope of the RAM	8
4.3.1 Waterproofing Upgrade	8
4.3.2 Soil Management	8
4.4 Schedule	9
5. Remediation Waste Management (310 CMR 40.0444[1][d])	10
6. Worker Protection and Environmental Monitoring (310 CMR 40.0444[1][e])	11
7. Federal, State and Local Permits (310 CMR 40.0444[1][f])	12

8. Construction of Buildings in Contaminated Areas (MassDEP Policy WSC-00-425)	13
9. Limitations	14
10. References	15

Tables

1. Chemical Testing Results – 10 Morton Street Soil Vapor
2. Chemical Testing Results – 10 Morton Street Pre-EPMM Indoor Air
3. Chemical Testing Results – Soil Data
4. Chemical Testing Results – 10 Morton Street Post-EPMM Indoor Air

Figures

1. Site Location Map
2. Site Plan
3. MassGIS Map
4. Sub-Slab Soil Vapor Point Locations

Appendices

- A. MassDEP Transmittal Forms
- B. Public Notice Letters
- C. Laboratory Data Reports

MEF/COC/ISG:jam
B:\Private\04516\15.0 Report Original\15.142 10 Morton Street RAM Plan (June 2023)\10 Morton RAM Plan.docx

Executive Summary

GEI Consultants, Inc. prepared this Release Abatement Measure (RAM) Plan and LSP Evaluation Opinion for Randal and Adriana Isaac (the Owners) of Somerville, Massachusetts for response actions associated with the renovation of 10 Morton Street in Somerville, Massachusetts (the Property). The Property is located within a Massachusetts Department of Environmental Protection (MassDEP) listed disposal site identified as 50 Tufts Street and assigned Release Tracking Number (RTN) 3-23246 (the Site).

The Property is a residential building within the Site boundary associated with a historic release of chlorinated Volatile Organic Compounds (VOCs) to soil and groundwater at 50 Tufts Street, located approximately 160 feet northwest of the Property across Tufts Street. From approximately 1955 to approximately 2002, 50 Tufts Street was used for storage and distribution of industrial chemicals, laundry supplies, and dry-cleaning supplies. Chemicals stored at and delivered to and from 50 Tufts Street included chlorinated solvents. These chlorinated VOCs - particularly tetrachloroethylene (PCE), trichloroethylene (TCE), and 1,1,1-trichloroethane (TCA) - have been detected in soil, soil vapor, indoor air, and groundwater at 50 Tufts Street.

In 2009, to address a potential complete vapor intrusion pathway, an Exposure Pathway Mitigation Measure (EPMM) was installed at the Property. In the basement, the EPMM consisted of a new concrete floor and a vapor barrier system both beneath the floor and on the fieldstone foundation walls below the outside grade, together with a venting system beneath the vapor barrier. An Activity and Use Limitation (AUL) was placed on the Property requiring that the integrity of the EPMM be maintained.

Site redevelopment includes renovation of the existing multi-family house. As part of the renovation, the Owners intend to lower the basement floor by approximately one foot by demolishing the existing concrete foundation slab and sub-slab piping system and vapor barrier. Construction will be managed so as not to intercept the water table, and dewatering will not be necessary.

To evaluate if the EPMM was necessary to maintain a condition of No Significant Risk (NSR) under current conditions, GEI collected 3 rounds of soil vapor samples from four locations beneath the foundation slab. Based on very low sub-slab soil vapor concentrations, the EPMM is not required to maintain a condition of NSR and, therefore, can be demolished. In accordance with 310 CMR 40.1080, it is the LSP's Opinion that this proposed change does not present a significant risk of harm to health, safety, public welfare, or the environment.

Prior to completion of the building renovation and occupancy, the AUL at the Property will be terminated and a Partial Permanent Solution, including an updated Risk Characterization, will be prepared.

The RAM is expected to begin in June 2023 and be completed in the fall of 2023 when the basement foundation slab and walls are reinstalled.

1. Introduction

GEI Consultants, Inc. prepared this Release Abatement Measure (RAM) Plan and LSP Evaluation Opinion on behalf of Randal and Adriana Isaac (the Owners) of Somerville, Massachusetts for response actions associated with the renovation of 10 Morton Street in Somerville, Massachusetts (the Property; Fig. 1). The Property is located within a Massachusetts Department of Environmental Protection (MassDEP) listed disposal site identified as 50 Tufts Street and assigned Release Tracking Number (RTN) 3-23246 (the Site; Fig. 2).

1.1 Purpose

The Property is subject to an Activity and Use Limitation (AUL). The purpose of this RAM Plan is to comply with the requirements of the Massachusetts Contingency Plan (MCP, 310 CMR 40.0440) and the requirement of the AUL that “any proposed changes in activities and uses which may result in higher levels of exposure to oil and/or hazardous material than [existed at the time that the AUL was recorded] be evaluated by an LSP who shall render an Opinion in accordance with 310 CMR 40.1080 et seq. as to whether the proposed changes will present a significant risk of harm to health, safety, public welfare, or the environment.”

1.2 Submittals

The MassDEP RAM Transmittal Form (BWSC106) and MassDEP AUL Transmittal Form (BWSC113) are being submitted electronically via eDEP, and copies are in Appendix A.

1.3 Public Involvement

As required by 310 CMR 40.1403, letters have been sent to the Mayor’s Office and Board of Health (Public Health Department) for the City of Somerville notifying them of the availability of the report. Copies of the notification letters are in Appendix B. GEI will provide copies of this RAM Plan to the local public document repositories that were established for the Site at the Somerville Central Public Library and at the City of Somerville Clerk’s Office.

1.4 Background

The Property is in a commercial/residential zoning district, and fronts Morton Street to the northeast, and is bounded by residential property to the north, south, and west. According to the Somerville Assessor’s Database, the existing residential dwelling was built in 1900. The Property is within the Site boundary associated with a historic release of chlorinated Volatile

Organic Compounds (VOCs) to soil and groundwater at 50 Tufts Street, located approximately 160 feet southwest of the Property across Tufts Street. From approximately 1955 to approximately 2002, 50 Tufts Street was used for storage and distribution of industrial chemicals, laundry supplies, and dry-cleaning supplies. Chemicals stored at and delivered to and from 50 Tufts Street included chlorinated solvents. These chlorinated VOCs - particularly tetrachloroethylene (PCE), trichloroethylene (TCE), and 1,1,1-trichloroethane (TCA) - have been detected in soil, soil vapor, indoor air, and groundwater at 50 Tufts Street.

Based on the results of assessments conducted to date, the Site includes the 50 Tufts Street property, together with portions of properties in the neighborhood to the east and west. Based on multiple rounds of groundwater measurements, the general direction of groundwater flow at the Site is to the northeast across Tufts Street towards Knowlton and Franklin Streets.

1.5 Project Description

In 2009, to eliminate or mitigate a potential complete vapor intrusion pathway, an EPMM was installed at the Property. In the basement, the EPMM consisted of a new concrete floor and a vapor barrier system both beneath the floor and on the fieldstone foundation walls below the outside grade, together with a venting system beneath the vapor barrier.

Site redevelopment includes renovation of the existing multi-family house. As part of the renovation, the Owners intend to lower the basement floor by approximately one foot by demolishing the existing concrete foundation slab and sub-slab piping system and vapor barrier. Construction will be managed so as not to intercept the water table, and dewatering will not be necessary.

Excess soil generated during construction will be managed by the Owners and their contractor and is outside of the scope of this RAM. Chlorinated volatile organic compounds (VOCs) have not been detected above laboratory reporting limits; therefore, soil on the Property is not remediation waste associated with the Site (RTN 3-23246).

1.6 Contact Information (310 CMR 40.0444[1][a])

Responsibility for the RAM

Mr. Randal Isaac
Ms. Adriana Isaac
88 Cross Street
Somerville, MA 02145
781-960-7738

Licensed Site Professional (LSP) for the RAM

Ileen Gladstone, P.G., LSP, LEED AP
GEI Consultants, Inc.
400 Unicorn Park Drive
Woburn, MA 01801
781.424.9924
LSP License No. 9719

2. Description of Release, Site Conditions, and Surrounding Receptors (310 CMR 40.0444[1][b])

2.1 Release Description

2.1.1 50 Tufts Street

The Property is within the Site boundary associated with a historic release of chlorinated VOCs to soil and groundwater at 50 Tufts Street, located approximately 160 feet southwest of the Property across Tufts Street. From approximately 1955 to approximately 2002, 50 Tufts Street was used for storage and distribution of industrial chemicals, laundry supplies, and dry-cleaning supplies. Chemicals stored at and delivered to and from 50 Tufts Street included chlorinated solvents. These chlorinated VOCs - particularly PCE, TCE, and 1,1,1- TCA - have been detected in soil, soil vapor, indoor air, and groundwater at 50 Tufts Street.

Based on the results of assessments conducted to date, the Site includes the 50 Tufts Street property, together with portions of properties in the neighborhood to the east and west. Based on multiple rounds of groundwater measurements, the general direction of groundwater flow at the Site is to the east across Tufts Street towards Knowlton and Franklin Streets. Chlorinated VOCs have been detected in groundwater beyond the 50 Tufts Street property boundaries.

2.1.2 10 Morton Street

10 Morton Street is a single-family residence located in a commercial/residential zoning district, and fronts Morton Street to the northeast, and is bounded by residential property to the north, south, and west. According to the Somerville Assessor's Database, the existing residential dwelling was built in 1900.

Chlorinated VOCs have been detected in groundwater beyond the 50 Tufts Street property boundaries. Chlorinated VOCs have also been detected above Method 1 GW-2 standards in groundwater samples collected from MW103, located approximately 50 feet east of the Property within Morton Street.

In May 2007, GEI collected two sub-slab soil vapor samples from beneath the building at 10 Morton Street (Table 1). PCE was detected in one sample at a concentration of 4.0 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$). GEI collected indoor air samples from the basement and first floor in August 2007, November 2007, and February 2008 (Table 2). PCE was detected in the basement in August 2007 at a concentration of 2.2 $\mu\text{g}/\text{m}^3$. PCE was detected

in both the basement and on the first floor in February 2008 at concentrations of 12 $\mu\text{g}/\text{m}^3$ and 2.2 $\mu\text{g}/\text{m}^3$, respectively.

Chlorinated VOCs generally have not been detected in soil beyond the limits of the 50 Tufts Street property. In addition, chlorinated VOCs have not been detected above laboratory reporting limits in the three soil samples collected between 2 to 16 feet from borings MW103 (Table 3), located within 50 feet of the Property.

2.1.3 Site Conditions

Subsurface investigations have not been performed at the Property. However, based on one soil boring performed by GEI in the vicinity of the Property (MW103), the Property's stratigraphy is estimated to be as follows:

- Sandy Fill: Sandy fill in this portion of the Site consists of approximately 4 feet of fine to coarse sand with some gravel and silt with trace amounts of brick and asphalt.
- Sandy Silt with Gravel: Underlying the sandy fill in this portion of the Site is a unit of sandy silt with gravel. It was observed at a depth of approximately 4 feet in the nearby boring. The boring was terminated at a depth of 16 feet.

Depths to groundwater at MW103, during groundwater sampling events, ranged from 7.25 to 12 feet below ground surface. Based on the results of GEI's groundwater elevation survey throughout the Site and our observation of Site topography, groundwater flows to the east.

2.2 Surrounding Receptors

The Property is in Somerville, Massachusetts. Potential human receptors include construction and utility workers under current and future uses, as well as residents and visitors under future use. Possible trespassers are also potential human receptors during the planned construction activities (from fugitive dust and/or direct contact).

There are no surface water bodies or wetlands located on the Property. We have not identified any sensitive environmental receptors within 500 feet of the Property. The Property is not located within a MassDEP-approved Wellhead Protection Area (Zone II Area), MassDEP Interim Wellhead Protection Area (IWPA), or potentially productive aquifer (PPA), and no public water supplies or private drinking water wells are within 500 feet. There is one Protected Open Space Area within 500 feet of the Property (Capuano Center). The closest surface water bodies are the Mystic River, located approximately 1 mile northeast of the Property, and the Charles River, located approximately 1.7 miles south-southeast of the Property. The MassGIS map showing sensitive receptors is in Fig. 3.

2.3 2023 Sub-Slab Soil Vapor Sampling

To evaluate the current concentration of soil vapor beneath the slab GEI performed sub-slab soil vapor sampling on March 8, 2023. Prior to collecting the soil-vapor samples, GEI installed four new soil-vapor points (SV1 through SV4) through the basement slab. The soil vapor point locations are shown on Fig. 4. The samples were collected over a 1-hour period and were sent to Alpha Analytical (Alpha) in Westborough, Massachusetts for analysis of VOCs. PCE was detected in all four samples at concentrations between $0.183 \mu\text{g}/\text{m}^3$ and $1.32 \mu\text{g}/\text{m}^3$.

GEI returned to the property on March 31, 2023, to collect four soil vapor samples from the sampling points. The samples were collected over a 1-hour period and were sent to Contest in East Longmeadow, Massachusetts for analysis of VOCs. Concentrations of chlorinated VOCs were not detected in any of the four samples collected above laboratory reporting limits.

GEI returned to the property on April 24, 2023, to collect four soil vapor samples from the sampling points. The samples were collected over a 1-hour period and were sent to Alpha for analysis of VOCs. PCE was detected in all four samples at concentrations between $0.285 \mu\text{g}/\text{m}^3$ and $1.22 \mu\text{g}/\text{m}^3$. Concentrations of other chlorinated VOCs were not detected in any of the four samples collected above laboratory reporting limits.

The results of the soil vapor sampling are summarized in Table 1. Laboratory data reports are in Appendix C.

2.4 2023 Soil Sample from Beneath Slab

On May 31, 2023, GEI collected one soil sample from beneath the slab. A portion of the slab was removed to provide access. The sample was submitted to ESS Laboratories (ESS) of Cranston, Rhode Island for the analysis of chlorinated VOCs. Concentrations of chlorinated VOCs were not detected above laboratory reporting limits. Laboratory data reports are in Appendix C.

3. Evaluation of Contemplated Site Activities and/or Use Changes (310 CMR 40.1080)

3.1 Requirement for an Activity and Use Limitation (AUL)

Based on the 2007 and 2008 indoor air sampling results, a vapor intrusion exposure pathway was identified at 10 Morton Street, and an EPMM was recommended. Prior to installation of the EPMM, the owners at the time and UniFirst Corporation executed a Grant of Remediation Easement and Restrictions that defined restrictions on the Property and their enforcement. Installation of the EPMM was completed in March 2009.

The EPMM included a floor ventilation system consisting of a vapor transmission layer (porous geotextile) capped by a 40-millimeter-thick, high-density polyethylene vapor barrier and a new, approximately 4-inch-thick concrete slab. Two vapor sumps are installed in the floor with polyvinyl chloride (PVC) ventilation piping that extends up to the floor joists, exits the building above the sill, and extends above the roofline. Soil vapor is captured by the vapor transmission layer and ventilated to the outdoor ambient air, bypassing the pathway through the slab into indoor air. The ventilation system is designed so that an electric powered fan may be added to facilitate the flow of soil vapor through the ventilation system, although a fan was never required. The EPMM also includes a wall vapor barrier system comprised of an approximately 1-inch-thick layer of cementitious stucco. The modified basement walls and floor are coated with a two-part epoxy vapor barrier.

Following installation of the EPMM, GEI collected indoor air samples from the basement and first floor in April 2009, February 2010, November 2010, December 2010, and March 2011. PCE was not detected above laboratory reporting limits in these samples. A summary of the post-EPMM installation indoor air sampling is in Table 4.

The EPMM eliminated or mitigated the exposure pathway for vapor intrusion of chlorinated VOCs into the indoor air at 10 Morton Street and achieved a condition of No Significant Risk (NSR). To maintain a condition of NSR, the integrity of the EPMM needed to be preserved. Therefore, an AUL was necessary to define the restricted and permitted activities to maintain a condition of NSR. The AUL is applicable to the entire Property.

An AUL was recorded at the Middlesex South District Registry of Deeds requiring the maintenance of the EPMM at 10 Morton Street to maintain a condition of NSR.

3.2 Contemplated Change in Site Activities and Uses

Site redevelopment is ongoing and includes renovation of the existing multi-family house. As part of the renovation, the Owners intend to lower the basement floor by approximately

one foot which will entail demolishing the existing concrete foundation slab and sub-slab piping system and vapor barrier.

The EPMM was originally installed to achieve a condition of NSR. Demolition of the slab, sub-slab piping system and vapor barrier undermines the integrity of the EPMM and will result in a change in activities and use that must be evaluated as required by 310 CMR 40.1080.

The EPMM was installed in 2009. Subsequently, Mass. DEP published guidance “WSC No. 16-435: Vapor Intrusion Guidance,” dated October 2016 (2016 VI Guidance) and revised the Unit Risk factor for PCE (January 2014) which is lower than MassDEP’s previously derived value. Based on current criteria, an EPMM would not have been required based on the PCE data collected in 2007 and 2008, i.e. a sub-slab soil vapor concentration ($4 \mu\text{g}/\text{m}^3$) and time weighted average indoor air concentration ($4.65 \mu\text{g}/\text{m}^3$).

To evaluate if the EPMM was necessary to maintain a condition of NSR under current conditions, GEI collected 3 rounds of soil vapor samples from 4 locations beneath the foundation slab. The maximum concentration of PCE detected in sub-slab soil vapor samples was $1.32 \mu\text{g}/\text{m}^3$, substantially less than the Residential Sub-Slab Soil Gas Screening Values (RSSV) of $98 \mu\text{g}/\text{m}^3$ in the 2016 VI Guidance. Sub-slab soil vapor concentrations less than the RSSV indicate that the vapor intrusion pathway is unlikely to be of concern under current and future site conditions and use. Concentrations of other chlorinated VOCs were not detected in any of the other soil vapor samples collected.

3.3 LSP Evaluation Opinion

Based on the very low sub-slab soil vapor concentrations, the EPMM is not required to maintain a condition of NSR and it can be demolished. Prior to completion of the building renovation and occupancy, the AUL at the Property will be terminated and a Partial Permanent Solution, including an updated Risk Characterization, will be prepared. In accordance with 310 CMR 40.1080, it is the LSP’s Opinion that this proposed change does not present a significant risk of harm to health, safety, public welfare, or the environment.

Prior to completion of the building renovation and occupancy, the AUL at the Property will be terminated and a Partial Permanent Solution, including an updated Risk Characterization, will be prepared.

4. RAM Objectives, Plan, and Schedule (310 CMR 40.0444[1][c])

The planned RAM activities are limited in scope and complexity and, therefore, meet the performance criteria described in 310 CMR 40.0441(2).

4.1 Objectives

The objective of this RAM Plan is to address renovation of the residential building which includes lowering the basement floor by approximately one foot and demolishing the existing concrete foundation slab and sub-slab piping system and vapor barrier.

The RAM Plan has been developed to be protective of construction workers, surrounding receptors, and future occupants of the proposed building. In addition, the RAM Plan was developed so that future investigation and remediation associated with the Site will not be significantly impeded by renovation of the residential building (Section 8).

4.2 Planned RAM Activities

The building foundation slab, sub-slab piping system, vapor barrier and the lower portion (approximately one-foot) wall vapor barrier system will be demolished and disposed offsite as solid waste. A new foundation slab will be installed.

Based on the anticipated depth of soil excavation during the building renovation and the depth to groundwater in the vicinity of the Property, groundwater will not be encountered during building renovation and dewatering will not be required.

4.3 Activities Outside the Scope of the RAM

4.3.1 *Waterproofing Upgrade*

Waterproofing will be installed beneath the building foundation slab and is outside the scope of this RAM. Although not required to mitigate a potential vapor intrusion pathway, the waterproofing will be upgraded to a membrane typically used as a vapor barrier. The specific product used for the vapor barrier will be included in the RAM Completion Report.

4.3.2 *Soil Management*

Excess soil generated during construction will be managed by the Owners and their contractor and is outside of the scope of this RAM. Chlorinated VOCs have not been detected above laboratory reporting limits; therefore, soil on the Property is not remediation waste associated with the Site (RTN 3-23246).

4.4 Schedule

The RAM is expected to begin in June 2023 and be completed in the fall of 2023 when the basement foundation slab and walls are reinstalled.

5. Remediation Waste Management (310 CMR 40.0444[1][d])

No remediation waste associated with RTN 3-23246 will be managed as part of this RAM.

6. Worker Protection and Environmental Monitoring (310 CMR 40.0444[1][e])

It is unlikely that contaminated soil or groundwater will be encountered during the project. The contractor will take typical safety precautions required for construction.

7. Federal, State and Local Permits (310 CMR 40.0444[1][f])

According to the Owners, they have obtained the necessary building, mechanical, and electrical permits required by the City of Somerville.

No other permits are required to perform the RAM.

8. Construction of Buildings in Contaminated Areas (MassDEP Policy WSC-00-425)

As part of the construction of buildings at a contaminated site, MassDEP Policy “WSC-00-425: Construction of Buildings in Contaminated Areas,” dated January 2000, and 310 CMR 40.0442(3) requires that a focused site assessment, risk characterization, and feasibility evaluation be included in RAM activities. These activities should incorporate the standards specified in the MCP (310 CMR 40.0800 and 40.0900). However, they need not be conducted at those sites where site conditions and risk have already been adequately addressed by inclusion in a Phase II and/or III report previously submitted to MassDEP. The Phase II / Phase III report for the Site was submitted to MassDEP in July 2008; therefore, the components identified for Policy WSC-00-425 are not included in the RAM Plan.

9. Limitations

This RAM Plan was prepared for the use of the Owners and UniFirst. The conclusions presented in this report are based solely on the information contained or referenced in this report. Additional quantitative information regarding the Site that was not available to us may result in a modification of the findings above. The report has been prepared in accordance with generally accepted geohydrological practices. No warranty, express or implied, is made.

10. References

- MassDEP (2019). The Massachusetts Contingency Plan (MCP), 310 CMR 40.0000. December 27, 2019.
- MassDEP (2023). MassGIS Site Scoring Map, 10 Morton Street, Somerville, MA. Massachusetts Department of Environmental Protection. June 1, 2023.
- GEI (2006). IRA Status Report No. 1, 50 Tufts Street, Somerville, MA, RTNs 3-23246, 3-24358 and 3-24376, dated May 8, 2006.
- GEI (2006). IRA Status Report No. 2 and Plan Modification No. 3, 50 Tufts Street, Somerville, MA, RTN 3-23246, dated November 13, 2006.
- GEI (2007). IRA Plan Modification No. 4, 50 Tufts Street, Somerville, MA, RTNs 3-23246 and 3-26114, dated February 22, 2007.
- GEI (2007). IRA Plan Modification No. 1, 50 Tufts Street, Somerville, MA, RTN 3-26114, dated April 12, 2007.
- GEI (2007). IRA Plan Modification No. 5, 50 Tufts Street, Somerville, MA, RTN 3-23246, dated May 5, 2007.
- GEI (2007). IRA Status Report No. 3, 50 Tufts Street, Somerville, MA, RTN 3-23246 & IRA Status Report No. 1 RTN 3-26114, dated May 10, 2007.
- GEI (2007). Remedial Monitoring Report No. 1, 50 Tufts Street, Somerville, MA, RTN 3-23246, dated August 30, 2007.
- GEI (2007). Monthly Remedial Monitoring Report No. 2, 50 Tufts Street, Somerville, MA, RTN 3-23246, dated August 30 2007.
- GEI (2007). Monthly Remedial Monitoring Report No. 3, 50 Tufts Street, Somerville, MA, RTN 3-23246, dated August 30, 2007.
- GEI (2007). Monthly Remedial Monitoring Report No. 4, 50 Tufts Street, Somerville, MA, RTN 3-23246, dated August 30, 2007.
- GEI (2007). IRA Plan Modification No. 7, 50 Tufts Street, Somerville, MA, RTN 3-23246, dated October 11, 2007.
- GEI (2007). IRA Plan Modification No. 8, 50 Tufts Street, Somerville, MA, RTN 3-23246, dated October 11, 2007.
- GEI (2007). Monthly Remedial Monitoring Report No. 5, 50 Tufts Street, Somerville, MA, RTN 3-23246, dated October 19, 2007.
- GEI (2007). Monthly Remedial Monitoring Report No. 6A, 50 Tufts Street, Somerville, MA, RTN 3-23246, dated October 31, 2007.

- GEI (2007). Monthly Remedial Monitoring Report No. 6B, 50 Tufts Street, Somerville, MA, RTN 3-23246, dated November 8, 2007.
- GEI (2007). Monthly Remedial Monitoring Report No. 7A, 50 Tufts Street, Somerville, MA, RTN 3-23246, dated November 8, 2007.
- GEI (2007). Monthly Remedial Monitoring Report No. 7B, 50 Tufts Street, Somerville, MA, RTN 3-23246, dated November 8, 2007.
- GEI (2007). IRA Status Report No. 4, 50 Tufts Street, Somerville, MA, RTN 3-23246, dated November 9, 2007.
- GEI (2008). IRA Status Report No. 5 and Remedial Monitoring Report (RMR) No. 8, 50 Tufts Street, Somerville, MA, RTN 3-23246, dated May 12, 2008.
- GEI (2008). Phase II Comprehensive Site Assessment (CSA), Method 3 Risk Characterization, and Phase III Remedial Action Plan (RAP), 50 Tufts Street, Somerville, MA, RTN 3-23246, dated July 14, 2008.
- GEI (2008). IRA Status Report No. 6 and Remedial Monitoring Report (RMR) No. 9, 50 Tufts Street, Somerville, MA, RTN 3-23246, dated November 10, 2008.
- GEI (2009). IRA Status Report No. 7 and Remedial Monitoring Report (RMR) No. 10, 50 Tufts Street, Somerville, MA, RTN 3-23246, dated May 11, 2009.
- GEI (2009). Phase IV Remedy Implementation Plan (RIP), 50 Tufts Street, Somerville, MA, RTN 3-23246, dated May 11, 2009.
- GEI (2009). IRA Completion Report and Remedial Monitoring Report (RMR) No. 11, 50 Tufts Street, Somerville, MA, RTN 3-23246, dated May 11, 2009.
- GEI (2010). Phase IV Status Report No. 1 and Remedial Monitoring Report No. 12, 50 Tufts Street, Somerville, MA, RTN 3-23246, dated February 8, 2009.
- GEI (2010). Phase IV Status Report No. 2 and Remedial Monitoring Report No. 13, 50 Tufts Street, Somerville, MA, RTN 3-23246, dated August 4, 2010.
- GEI (2011). Phase IV Status Report No. 3 and Remedial Monitoring Report No. 14, 50 Tufts Street, Somerville, MA, RTN 3-23246, dated February 11, 2011.
- GEI (2011). Immediate Response Action Completion Report Amendment, RTN 3-23246, 50 Tufts Street Site, Somerville, Massachusetts, dated April 1, 2011.
- GEI (2011). Phase IV Final Inspection Report, Remedial Monitoring Report No. 15, and Phase V Remedy Operation Status Report. 50 Tufts Street, Somerville, Massachusetts, dated August 4, 2011.
- GEI (2012). Phase V Status Report No. 1 and Remedial Monitoring Report No. 16, 50 Tufts Street, Somerville, MA, RTN 3-23246, dated February 10, 2012.

- GEI (2012). Phase V Status Report No. 2 and Remedial Monitoring Report No. 17, 50 Tufts Street, Somerville, MA, RTN 3-23246, dated August 4, 2012.
- GEI (2013). Phase V Status Report No. 3 and Remedial Monitoring Report No. 18, 50 Tufts Street, Somerville, MA, RTN 3-23246, dated February 8, 2013.
- GEI (2013). Phase V Status Report No. 4 and Remedial Monitoring Report No. 19, 50 Tufts Street, Somerville, MA, RTN 3-23246, dated August 2, 2013.
- GEI (2014). Phase V Status Report No. 5 and Remedial Monitoring Report No. 20, 50 Tufts Street, Somerville, MA, RTN 3-23246, dated February 10, 2014.
- GEI (2014). Phase V Status Report No. 6 and Remedial Monitoring Report No. 21, 50 Tufts Street, Somerville, MA, RTN 3-23246, dated August 1, 2014.
- GEI (2015). Phase V Status Report No. 7 and Remedial Monitoring Report No. 22, 50 Tufts Street, Somerville, MA, RTN 3-23246, dated February 2, 2015.
- GEI (2015). Phase V Status Report No. 8 and Remedial Monitoring Report No. 23, 50 Tufts Street, Somerville, MA, RTN 3-23246, dated August 3, 2015.
- GEI (2016). Phase V Status Report No. 9 and Remedial Monitoring Report No. 24, 50 Tufts Street, Somerville, MA, RTN 3-23246, dated February 2, 2016.
- GEI (2016). Phase V Status Report No. 10 and Remedial Monitoring Report No. 25, 50 Tufts Street, Somerville, MA, RTN 3-23246, dated August 3, 2016.
- GEI (2017). Phase V Status Report No. 11 and Remedial Monitoring Report No. 26, 50 Tufts Street, Somerville, MA, RTN 3-23246, dated February 2, 2017.
- GEI (2017). Phase V Status Report No. 12 and Remedial Monitoring Report No. 27, 50 Tufts Street, Somerville, MA, RTN 3-23246, dated August 2, 2017.
- GEI (2017). Phase V Status Report No. 13 and Remedial Monitoring Report No. 28, 50 Tufts Street, Somerville, MA, RTN 3-23246, dated February 2, 2018.
- GEI (2018). Phase V Status Report No. 14 and Remedial Monitoring Report No. 29, 50 Tufts Street, Somerville, MA, RTN 3-23246, dated August 2, 2018.
- GEI (2019). Phase V Status Report No. 15 and Remedial Monitoring Report No. 30, 50 Tufts Street, Somerville, MA, RTN 3-23246, dated February 5, 2019.
- GEI (2019). Phase V Status Report No. 16 and Remedial Monitoring Report No. 31, 50 Tufts Street, Somerville, MA, RTN 3-23246, dated August 2, 2019.
- GEI (2020). Phase V Status Report No. 17 and Remedial Monitoring Report No. 32, 50 Tufts Street, Somerville, MA, RTN 3-23246, dated February 3, 2020.
- GEI (2020). Phase V Status Report No. 18 and Remedial Monitoring Report No. 33, 50 Tufts Street, Somerville, MA, RTN 3-23246, dated August 2, 2020.

GEI (2021). Phase V Status Report No. 19 and Remedial Monitoring Report No. 34,
50 Tufts Street, Somerville, MA, RTN 3-23246, dated February 4, 2021.

GEI (2021). Phase V Status Report No. 20 and Remedial Monitoring Report No. 35,
50 Tufts Street, Somerville, MA, RTN 3-23246, dated August 2, 2021.

GEI (2022). Phase V Status Report No. 21 and Remedial Monitoring Report No. 36,
50 Tufts Street, Somerville, MA, RTN 3-23246, dated February 2, 2022.

GEI (2022). Phase V Status Report No. 22 and Remedial Monitoring Report No. 37,
50 Tufts Street, Somerville, MA, RTN 3-23246, dated August 2, 2022.

GEI (2023). Phase V Status Report No. 23 and Remedial Monitoring Report No. 38,
50 Tufts Street, Somerville, MA, RTN 3-23246, dated February 2, 2023.

Tables

Table 1 - Summary of Sub-Slab Soil Vapor Testing Results
Release Abatement Measure Plan
10 Morton Street
Somerville, Massachusetts

Sample Location: Sample Name: Sample Date: Collected by: Units:			10 Morton Street																													
			10Mort- SG1 5/9/2007 GEI		10Mort- SS1 5/9/2007 GEI		10MORT-SV1 3/8/2023 GEI		10MORT-SV2 3/8/2023 GEI		10MORT-SV3 3/8/2023 GEI		10MORT-SV4 3/8/2023 GEI		10MORT-SV1 3/31/2023 GEI		10MORT-SV2 3/31/2023 GEI		10MORT-SV3 3/31/2023 GEI		10MORT-SV4 3/31/2023 GEI		10MORT-SV1 4/24/2023 GEI		10MORT-SV2 4/24/2023 GEI		10MORT-SV3 4/24/2023 GEI		10MORT-SV4 4/24/2023 GEI			
			µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv
			Analyte	Method	Residential Sub-Slab Soil Gas Screening Values (µg/m³)																											
Volatile Organic Compounds (VOCs)			TO-15																													
cis-1,2-Dirchloroethylene (cis-1,2-DCE)				56	<0.79	<0.20	<0.79	<0.20	0.083	0.021	0.115	0.029	<0.079	<0.020	<0.079	<0.020	<0.40	<0.10	<0.40	<0.10	<0.40	<0.10	<0.40	<0.10	<0.079	<0.020	<0.079	<0.020	<0.079	<0.020	<0.079	<0.020
Tetrachloroethylene (PCE)				98	4.0	0.59	<1.4	<0.20	1.06	0.156	1.32	0.194	0.183	0.027	0.292	0.043	<0.68	<0.10	<0.68	<0.10	<0.68	<0.10	<0.68	<0.10	0.353	0.052	0.407	0.060	1.22	0.180	0.285	0.042
1,1,1-Trichloroethane				210	1.2	0.22	0.87 J	0.16 J	<0.109	<0.020	<0.109	<0.020	<0.109	<0.020	<0.109	<0.020	<0.55	<0.10	<0.55	<0.10	<0.55	<0.10	<0.55	<0.10	<0.109	<0.020	<0.109	<0.020	<0.109	<0.020	<0.109	<0.020
Trichloroethylene (TCE)				28	<1.1	<0.20	<1.1	<0.20	<0.107	<0.020	0.258	0.048	<0.107	<0.020	<0.107	<0.020	<0.54	<0.10	<0.54	<0.10	<0.54	<0.10	<0.54	<0.10	<0.107	<0.020	<0.107	<0.020	<0.107	<0.020	<0.107	<0.020

- General Notes**
- Analytes detected in at least one sample are reported here. For a complete list of analytes see the attached laboratory data sheets.
 - µg/m³ = micrograms per cubic meter.
 - ppbv = parts per billion by volume.

**Table 2 - Chemical Testing Results - Pre-EPEM Installation Indoor Air
Release Abatement Measure Plan
10 Morton Street
Somerville, Massachusetts**

Sample Location: Sample Name: Sample Date: Units:		10 Morton Street											
		10MORT 1 8/10/07		10MORT B 8/10/07		10MORT-1 11/12/07		10MORT-B 11/12/07		10MORT-1 2/21/08		10MORT-B 2/21/08	
		µg/m ³	ppbv	µg/m ³	ppbv	µg/m ³	ppbv	µg/m ³	ppbv	µg/m ³	ppbv	µg/m ³	ppbv
Analyte	Method												
Volatile Organic Compounds (VOCs)	TO-15												
Carbon tetrachloride		0.63 J	0.10 J	< 1.3	< 0.20	0.69 J	0.11 J	0.62 J	0.099 J	0.63 J	0.10 J	< 1.3	< 0.20
Tetrachloroethylene (PCE)		< 1.4	< 0.20	2.2	0.33	< 1.4	< 0.20	< 1.4	< 0.20	2.2	0.32	12	1.8
1,1,1-Trichloroethane (TCA)		< 1.1	< 0.20	4.3	0.79	< 1.1	< 0.20	0.60 J	0.11 J	< 1.1	< 0.20	0.47 J	0.087 J

General Notes:

1. Analytes detected in at least one sample are reported here. For a complete list of analytes see the attached laboratory data sheets.
2. µg/m³ = micrograms per cubic meter.
3. ppbv = parts per billion by volume.
4. "<" = The analyte was not detected at a concentration above the specified laboratory reporting limit.

Qualifying Note:

- J The reported result is below the laboratory reporting limit and is estimated.

Table 3 - Chemical Testing Results - Subsurface Soil

Release Abatement Measure Plan

10 Morton Street

Somerville, Massachusetts

			Location Name:		
			Sample Name:		
			Sample Depth (ft):		
			Sample Date:		
Analyte			Method	Units	
Volatile Organic Compounds (VOCs)					
Benzene	8260	mg/kg	< 0.03	< 0.023	< 0.021
Butanone,2- (MEK)			< 0.3	< 0.23	< 0.21
Butylbenzene,sec-			< 0.3	< 0.23	< 0.21
Dichloroethane,1,1-			< 0.12	< 0.091	< 0.082
Dichloroethylene, cis-1,2-			< 0.12	< 0.091	< 0.082
Ethylbenzene			< 0.12	< 0.091	< 0.082
Isopropyltoluene,4-			< 0.3	< 0.23	< 0.21
Methyl tert-butyl ether			< 0.12	< 0.091	< 0.082
Methyl-2-pentanone,4- (MIBK)			< 0.3	< 0.23	< 0.21
Methylene chloride			< 0.12	< 0.091	< 0.082
Naphthalene			< 0.3	< 0.23	< 0.21
Propylbenzene, n-			< 0.3	< 0.23	< 0.21
Tetrachloroethylene (PCE)			< 0.12	< 0.091	0.722
Toluene			< 0.3	< 0.23	< 0.21
Trichloroethane,1,1,1- (TCA)			< 0.12	< 0.091	< 0.082
Trichloroethylene (TCE)			< 0.12	< 0.091	< 0.082
Trimethylbenzene, 1,3,5-			< 0.3	< 0.23	< 0.21
Xylene, m,p-			< 0.12	< 0.091	< 0.082
Xylene, o-			< 0.12	< 0.091	< 0.082
Total Xylenes			< 0.12	< 0.091	< 0.082
Volatile Petroleum Hydrocarbons (VPH)					
C5-C8 Aliphatics	MAVPH	mg/kg	NT	NT	NT
Extractable Petroleum Hydrocarbons (EPH)					
C11-C22 Aromatics	MAEPH	mg/kg	NT	NT	NT
Other					
Solids, Percent	1603M	%	85.9	92.2	87.4
Specific Conductivity	E120.1	µmhos/cm	NT	NT	NT
Total Organic Carbon	9060	mg/kg	NT	NT	NT
pH	9045	s.u.	NT	NT	NT

General Notes:

1. Generally, only analytes detected in at least one sample are reported here. For a complete list of analytes see the laboratory data sheets.
2. "<" = The analyte was not detected at a concentration above the specified reporting limit.
3. mg/kg = milligrams per kilogram.
4. µmhos/cm = micro-ohms per centimeter.
5. s.u. = standard units.
6. ND = The analyte was not detected above the laboratory reporting limit. See the laboratory data sheets for the laboratory reporting limit.
7. NT = Not Tested.

Qualifying Notes:

- B The reported result is attributed to sampling or laboratory contamination.
- F+ The result has a high bias due to matrix spike recovery above upper control limits.
- J The reported result is below the laboratory reporting limit and is estimated.

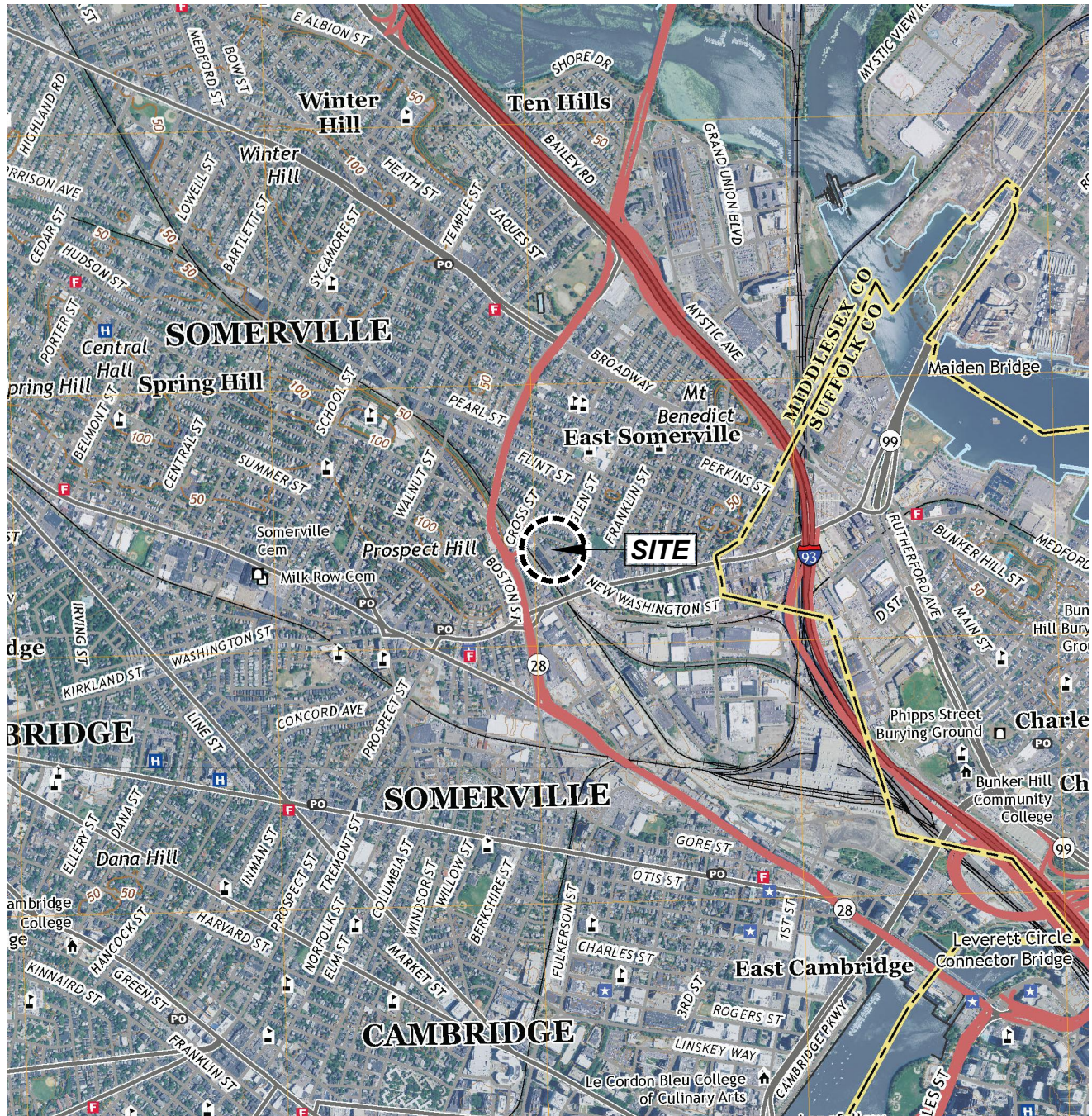
**Table 4 - Chemical Testing Results - Post-EPEM Installation Indoor Air
Release Abatement Measure Plan
10 Morton Street
Somerville, Massachusetts**

Sample Location: Sample Name: Sample Date: Units:		10 Morton Street																			
		10MORT-1		10MORT-B		10MORT-1		10MORT-B		10MORT-1		10MORT-B		10MORT-1		10MORT-B		10MORT-1		10MORT-B	
		4/3/09		4/3/09		2/12/10		2/12/10		11/13/10		11/13/10		12/18/10		12/18/10		3/5/11		3/5/11	
		µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv
Analyte	Method																				
Volatile Organic Compounds (VOCs)																					
Trichloroethylene (TCE)		< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	2.9	0.54	13	2.4	< 1.1	< 0.20	1.4	0.26	< 1.1	< 0.20	2.4	0.45

General Notes:

1. Analytes detected in at least one sample are reported here. For a complete list of analytes see the attached laboratory data sheets.
2. $\mu\text{g}/\text{m}^3$ = micrograms per cubic meter.
3. ppbv = parts per billion by volume.
4. "<" = The analyte was not detected at a concentration above the specified laboratory reporting limit.
5. EPEM = Exposure Pathway Elimination Measure.
6. The samples collected in February 2010 were collected over a 24-hour period from February 11 through 12, 2010.
7. The samples collected in November 2010 were collected over a 24-hour period from November 12 through 13, 2010.
8. The samples collected in December 2010 were collected over a 24-hour period from December 17 through 18, 2010.
9. The samples collected in March 2011 were collected over a 24-hour period from March 4 through 5, 2011.

Figures



This Image is from U.S.G.S. Topographic 7.5 Minute Series
 Boston North, MA Quadrangle, 2018.
 Datum is North American Vertical Datum of 1988 (NAVD88).
 Contour Interval is 10 Feet.



Release Abatement Measure Plan
 50 Tufts Street
 Somerville, Massachusetts

UniFirst Corporation
 Wilmington, Massachusetts

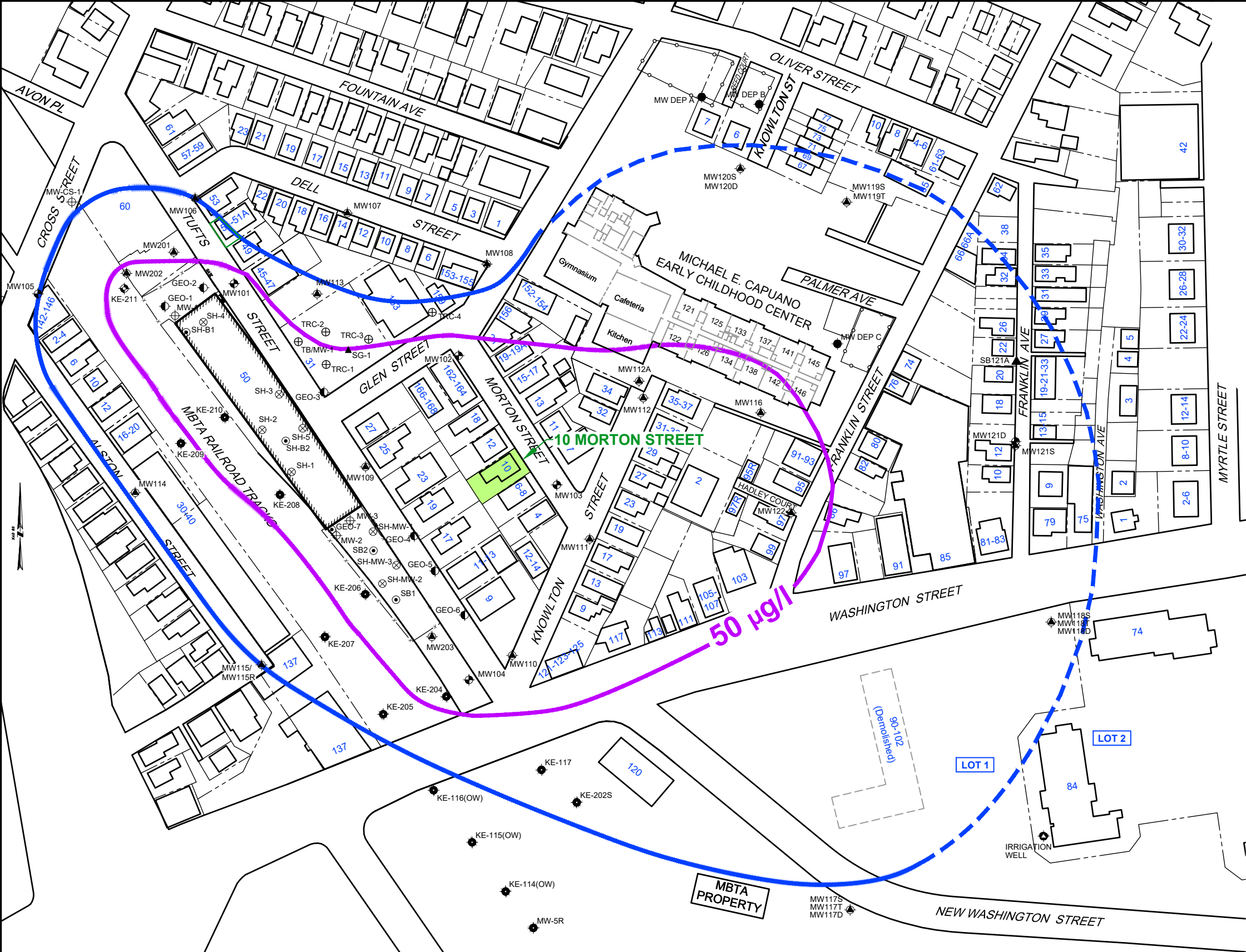


Project 045163

SITE LOCATION MAP

June 2023

Fig. 1



LEGEND:

- ⊕ MONITORING WELL INSTALLED BY TRC, 2014
- ▲ SOIL GAS SAMPLING POINT BY TRC, 2014
- ⊕ MONITORING WELL WITH SOIL VAPOR SAMPLE PORT INSTALLED BY GEI, JANUARY 2007 - JANUARY 2008
- MONITORING WELL BY KLEINFELDER, SEPTEMBER 2012, MARCH 2014, AND APRIL 2014
- ⊗ MONITORING WELL INSTALLED BY SANBORN HEAD ASSOCIATES, 2002
- ⊖ MONITORING WELL INSTALLED BY GEOINSIGHT, JUNE 2004
- ⊙ SOIL BORING ADVANCED BY GEOINSIGHT, AUGUST 2004
- ⊖ MONITORING WELL INSTALLED BY GEI, MAY 2006
- DRIVEN POINT MONITORING WELL INSTALLED BY MADEP, MAY 2007
- ⊕ MONITORING WELL INSTALLED PREVIOUSLY, DATE UNKNOWN
- ⊖ PREVIOUSLY INSTALLED IRRIGATION WELL

84 STREET ADDRESS

MBTA = MASSACHUSETTS BAY TRANSPORTATION AUTHORITY

DISPOSAL SITE BOUNDARY (DASHED WHERE INFERRED)

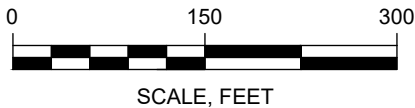
EXTENT OF PCE CONCENTRATION IN SHALLOW GROUNDWATER GREATER THAN OR EQUAL TO 50 MICROGRAMS PER LITER (µg/l)

µg/l = MICROGRAMS PER LITER

PORTION OF SITE SUBJECT TO THE RAM

GENERAL NOTES:

- HORIZONTAL CONTROL FOR THIS PLAN WAS ESTABLISHED BY GPS AND IS BASED ON THE NORTH AMERICAN DATUM OF 1983.
- STREET AND PROPERTY LINES BASED ON SOMERVILLE ASSESSORS' MAPS AND ARE BEST FIT RELATIVE TO THE LOCATION OF THE 50 TUFTS ST. BUILDING.
- MONITORING WELL LOCATIONS WERE ESTABLISHED BASED ON THE GROUND SURVEYS BY BSC GROUP, INC.
- GEI OBSERVED ABANDONMENT OF SH-MW1 AND SH-1 THROUGH SH-5 IN 2007.



Release Abatement Measure Plan
50 Tufts Street
Somerville, Massachusetts
UniFirst Corporation
Wilmington, Massachusetts



Project 045163

10 Morton Street
Portion of Disposal Site
Subject to RAM

June 2023

Fig. 2

MassDEP - Bureau of Waste Site Cleanup

Phase 1 Site Assessment Map: 500 feet & 0.5 Mile Radii

Site Information:

50 TUFTS STREET
10 MORTON STREET SOMERVILLE, MA
3-000023246

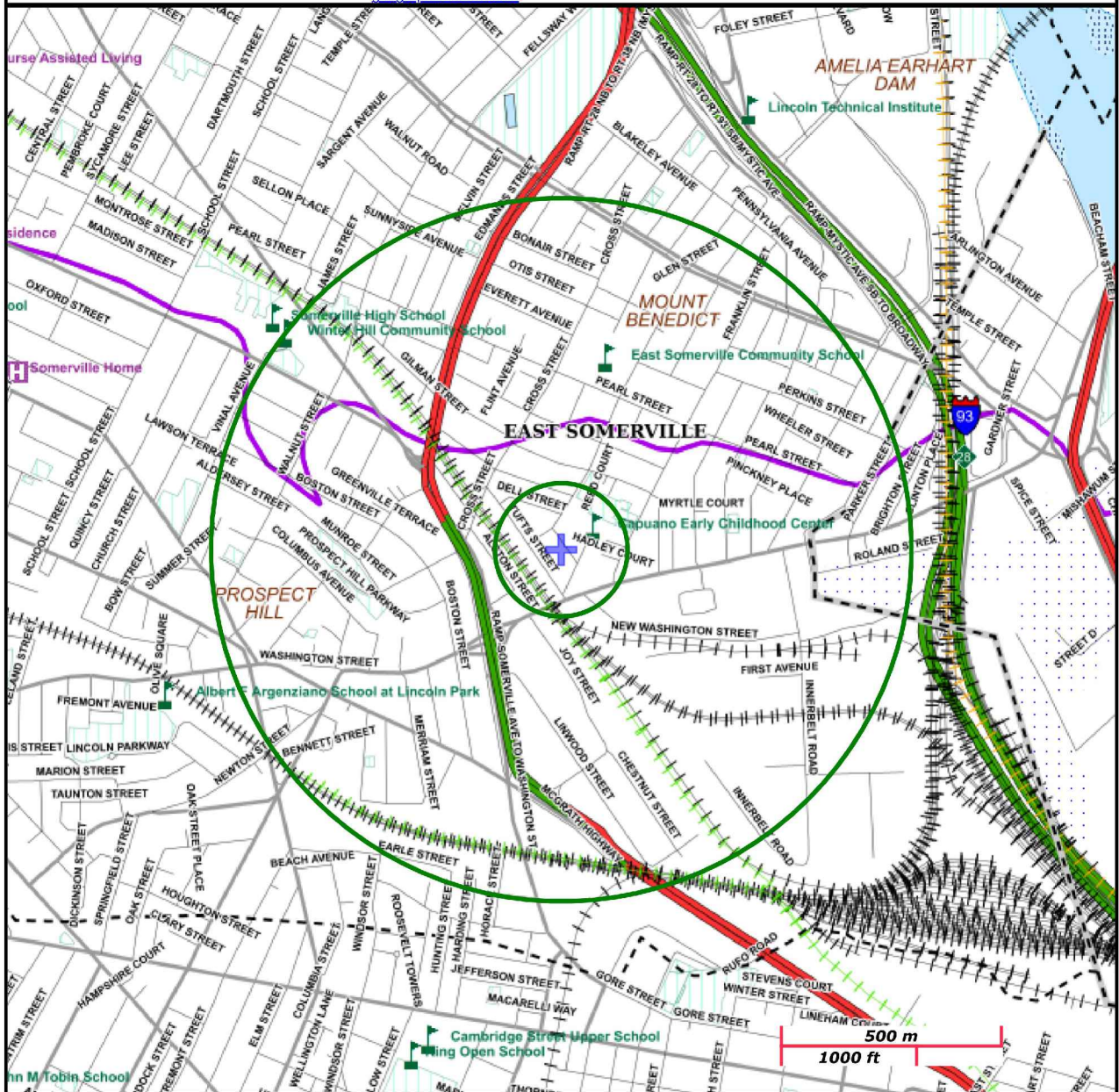
NAD83 UTM Meters:
4694304mN , 328137mE (Zone: 19)
June 1, 2023

The information shown is the best available at the date of printing. However, it may be incomplete. The responsible party and LSP are ultimately responsible for ascertaining the true conditions surrounding the site. Metadata for data layers shown on this map can be found at:
<https://www.mass.gov/orgs/massdeps-bureau-of-geographic-information>



MassDEP

Commonwealth of Massachusetts
Department of Environmental Protection



Roads: Limited Access, Divided, Other Hwy, Major Road, Minor Road, Trail

Boundaries: Town, County, DEP Region; Train; Powerline; Pipeline; Aqueduct

Basins: Major, PWS; Streams: Perennial, Intermittent, Man Made Shore, Dam

Aquifers: Medium Yield, High Yield, EPA Sole Source

Non Potential Drinking Water Source Area: Medium, High (Yield)

PWS Protection Areas: Zone II, IWPA, Zone A

Hydrography: Open Water, PWS Reservoir, Tidal Flat

Wetlands: Freshwater, Saltwater, Cranberry Bog

FEMA 100yr Floodplain; Protected Open Space; ACEC

NHESP Pri-Hab of Rare Species; Vernal Pool: Cert, Potential

Solid Waste Landfill; PWS: Com, GW, SW, Emerg, Non-Com

Release Abatement Measure Plan
50 Tufts Street
Somerville, Massachusetts

UniFirst Corporation
Wilmington, Massachusetts



Project 045163

MASSDEP GIS MAP

June 2023

Fig. 3



Release Abatement Measure Plan
50 Tufts Street
Somerville, Massachusetts

UniFirst Corporation
Wilmington, Massachusetts



Project 045163

10 MORTON STREET
SUB-SLAB SOIL VAPOR POINT
LOCATIONS

June 2023

Fig. 4

Appendix A

MassDEP Transmittal Forms



**RELEASE ABATEMENT MEASURE (RAM)
TRANSMITTAL FORM**

Pursuant to 310 CMR 40.0444 - 0446 (Subpart D)

Release Tracking Number

3 - 23246

A. SITE LOCATION:

1. Site Name/Location Aid: 50 TUFTS ST & PROP ACROSS THE ST
2. Street Address: 50 TUFTS ST
3. City/Town: SOMERVILLE 4. Zip Code: 021454129
- ☒ 5. Check here if the disposal site that is the source of the release is Tier Classified. Check the current Tier Classification Category.
- ☐ a. Tier I ☐ b. Tier ID ☒ c. Tier II

B. THIS FORM IS BEING USED TO: (check all that apply)

1. List Submittal Date of Initial RAM Plan (if previously submitted): (mm/dd/yyyy)
- ☒ 2. Submit an **Initial Release Abatement Measure (RAM) Plan**.
- ☒ a. Check here if the RAM is being conducted as part of the construction of a permanent structure. If checked, you must specify what type of permanent structure is to be erected in or in the immediate vicinity of the area where the RAM is to be conducted.
- b. Specify type of permanent structure: (check all that apply) ☐ i. School ☒ ii. Residential ☐ iii. Commercial
- ☐ iv. Industrial ☐ Other Specify:
- ☐ 3. Submit a **Modified RAM Plan** for previously submitted RAM Plan.
- ☐ 4. Submit a **RAM Status Report**.
- ☐ 5. Submit a **Remedial Monitoring Report**. (This report can only be submitted through eDEP, concurrent with a RAM Status Report.)
- a. Type of Report: (check one) ☐ i. Initial Report ☐ ii. Interim Report ☐ iii. Final Report
- b. Frequency of Submittal:
- ☐ i. A Remedial Monitoring Report(s) submitted every six months, concurrent with a RAM Status Report.
- ☐ ii. A Remedial Monitoring Report(s) submitted annually, concurrent with a RAM Status Report.
- c. Number of Remedial Systems and/or Monitoring Programs:
- A separate BWSC106A, RAM Remedial Monitoring Report, must be filled out for each Remedial System and/or Monitoring Program addressed by this transmittal form.
- ☐ 6. Submit a **RAM Completion Statement**.
- ☐ 7. Submit a **Revised RAM Completion Statement**.
8. Provide Additional RTNs:
- ☐ a. Check here if this RAM Submittal covers additional Release Tracking Numbers (RTNs). RTNs that have been previously linked to a Primary Tier Classified RTN do not need to be listed here. This section is intended to allow a RAM to cover more than one unclassified RTN and not show permanent linkage to a Primary Tier Classified RTN.
- b. Provide the additional Release Tracking Number(s) covered by this RAM Submittal.
- ☐ 9. Include in the **RAM Plan** or **Modified RAM Plan** a **Plan for the Application of Remedial Additives** near a sensitive receptor, pursuant to 310 CMR 40.0046(3).

(All sections of this transmittal form must be filled out unless otherwise noted above)



**RELEASE ABATEMENT MEASURE (RAM)
TRANSMITTAL FORM**

Release Tracking Number

3

-

23246

Pursuant to 310 CMR 40.0444 - 0446 (Subpart D)

C. RELEASE OR THREAT OF RELEASE CONDITIONS THAT WARRANT RAM:

1. Media Impacted and Receptors Affected: (check all that apply)

☐ a. Paved Surface

☐ b. Basement

☐ c. School

☐ d. Public Water Supply

☐ e. Surface Water

☐ f. Zone 2

☐ g. Private Well

☒ h. Residence

☐ i. Soil

☒ j. Ground Water

☐ k. Sediments

☐ l. Wetland

☐ m. Storm Drain

☒ n. Indoor Air

☐ o. Air

☐ p. Soil Gas

☒ q. Sub-Slab Soil Gas

☐ r. Critical Exposure Pathway

☐ s. NAPL

☐ t. Unknown

☐ u. Others

Specify:

2. Sources of the Release or TOR: (check all that apply)

☐ a. Transformer

☐ b. Fuel Tank

☒ c. Pipe

☐ d. OHM Delivery

☐ e. AST

☒ f. Drums

☐ g. Tanker Truck

☐ h. Hose

☐ i. Line

☐ j. UST

Describe:

☐ k. Vehicle

☐ l. Boat/Vessel

☐ m. Unknown

☐ n. Other:

3. Type of Release or TOR: (check all that apply)

☐ a. Dumping

☐ b. Fire

☐ c. AST Removal

☐ d. Overfill

☐ e. Rupture

☐ f. Vehicle Accident

☐ g. Leak

☒ h. Spill

☐ i. Test Failure

☐ j. TOR Only

☐ k. UST Removal

Describe:

☐ l. Unknown

☐ m. Other:

4. Identify Oils and Hazardous Materials Released: (check all that apply)

☐ a. Oils

☒ b. Chlorinated Solvents

☐ c. Heavy Metals

☐ d. Others

Specify:

D. DESCRIPTION OF RESPONSE ACTIONS. (check all that apply, for volumes list cumulative amounts)

☒ 1. Assessment and/or Monitoring Only

☐ 2. Temporary Covers or Caps

☐ 3. Deployment of Absorbent or Containment Materials

☐ 4. Temporary Water Supplies

☐ 5. Structure Venting System/HVAC Modification System

☐ 6. Temporary Evacuation or Relocation of Residents

☐ 7. Product or NAPL Recovery

☐ 8. Fencing and Sign Posting

☐ 9. Groundwater Treatment Systems

☐ 10. Soil Vapor Extraction

☐ 11. Remedial Additives

☐ 12. Air Sparging

☐ 13. Active Exposure Pathway Mitigation System

☐ 14. Passive Exposure Pathway Mitigation System

☐ 15. Monitored Natural Attenuation

☐ 16. In-Situ Chemical Oxidation



**RELEASE ABATEMENT MEASURE (RAM)
TRANSMITTAL FORM**

Release Tracking Number

3

- 23246

Pursuant to 310 CMR 40.0444 - 0446 (Subpart D)

D. DESCRIPTION OF RESPONSE ACTIONS (cont.): (check all that apply, for volumes list cumulative amounts)

☐ 17. Excavation of Contaminated Soils

☐ a. Re-use, Recycling or Treatment

☐ i. On Site

Estimated volume in cubic yards _____

☐ ii. Off Site

Estimated volume in cubic yards _____

ii.a. Receiving Facility: _____

Town: _____

State: _____

ii.b. Receiving Facility: _____

Town: _____

State: _____

iii. Describe: _____

☐ b. Store

☐ i. On Site

Estimated volume in cubic yards _____

☐ ii. Off Site

Estimated volume in cubic yards _____

ii.a. Receiving Facility: _____

Town: _____

State: _____

ii.b. Receiving Facility: _____

Town: _____

State: _____

☐ c. Landfill

☐ i. Cover

Estimated volume in cubic yards _____

Receiving Facility: _____

Town: _____

State: _____

☐ ii. Disposal

Estimated volume in cubic yards _____

Receiving Facility: _____

Town: _____

State: _____

☐ 18. Removal of Drums, Tanks or Containers:

a. Describe Quantity and Amount: _____

b. Receiving Facility: _____

Town: _____

State: _____

c. Receiving Facility: _____

Town: _____

State: _____

☐ 19. Removal of Other Contaminated Media:

a. Specify Type and Volume: _____

b. Receiving Facility: _____

Town: _____

State: _____

c. Receiving Facility: _____

Town: _____

State: _____

☐ 20. Other Response Actions:

Describe: _____

☐ 21. Use of Innovative Technologies:

Describe: _____



**RELEASE ABATEMENT MEASURE (RAM)
TRANSMITTAL FORM**

Release Tracking Number

3

- 23246

Pursuant to 310 CMR 40.0444 - 0446 (Subpart D)

E. LSP SIGNATURE AND STAMP :

I attest under the pains and penalties of perjury that I have personally examined and am familiar with this transmittal form, including any and all documents accompanying this submittal. In my professional opinion and judgment based upon application of (i) the standard of care in 309 CMR 4.02(1), (ii) the applicable provisions of 309 CMR 4.02(2) and (3), and 309 CMR 4.03(2), and (iii) the provisions of 309 CMR 4.03(3), to the best of my knowledge, information and belief,

> if Section B of this form indicates that a **Release Abatement Measure Plan** is being submitted, the response action(s) that is (are) the subject of this submittal (i) has (have) been developed in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, (ii) is (are) appropriate and reasonable to accomplish the purposes of such response action(s) as set forth in the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000 and (iii) comply(ies) with the identified provisions of all orders, permits, and approvals identified in this submittal;

> if Section B of this form indicates that a **Release Abatement Measure Status Report** and/or **Remedial Monitoring Report** is being submitted, the response action(s) that is (are) the subject of this submittal (i) is (are) being implemented in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, (ii) is (are) appropriate and reasonable to accomplish the purposes of such response action(s) as set forth in the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000 and (iii) comply (ies) with the identified provisions of all orders, permits, and approvals identified in this submittal;

> if Section B of this form indicates that a **Release Abatement Measure Completion Statement** is being submitted, the response action(s) that is (are) the subject of this submittal (i) has (have) been developed and implemented in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, (ii) is (are) appropriate and reasonable to accomplish the purposes of such response action(s) as set forth in the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000 and (iii) comply(ies) with the identified provisions of all orders, permits, and approvals identified in this submittal:

I am aware that significant penalties may result, including, but not limited to, possible fines and imprisonment, if I submit information which I know to be false, inaccurate, or materially incomplete.

1. LSP #: 9715
2. First Name: ILEEN S 3. Last Name: GLADSTONE
4. Telephone: 7817214012 5. Ext: 6. Email: igladstone@geiconsultants.com
7. Signature:
8. Date: 9. LSP Stamp:
(mm/dd/yyyy)



Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC 106

12

**RELEASE ABATEMENT MEASURE (RAM)
TRANSMITTAL FORM**

Release Tracking Number

3

-

23246

Pursuant to 310 CMR 40.0444 - 0446 (Subpart D)

F. PERSON UNDERTAKING RAM:

1. Check all that apply: ☐ a. change in contact name ☐ b. change of address ☒ c. change in the person undertaking response actions

2. Name of Organization: RANDAL ISAAC

3. Contact First Name: RANDAL

4. Last Name: ISAAC

5. Street: 10 MORTON

6. Title: _____

7. City/Town: SOMERVILLE

8. State: MA

9. ZIP Code: 021450000

10. Telephone: 7819607738

11. Ext.: _____

12. Email: randal_lane65@yahoo.com

G. RELATIONSHIP TO RELEASE OR THREAT OF RELEASE OF PERSON UNDERTAKING RAM:

☒ Check here to change relationship

☒ 1. RP or PRP

☐ a. Owner

☐ b. Operator

☐ c. Generator

☐ d. Transporter

☒ e. Other RP or PRP

Specify:

ELIGIBLE PERSON

☐ 2. Fiduciary, Secured Lender or Municipality with Exempt Status (as defined by M.G.L. c. 21E, s. 2)

☐ 3. Agency or Public Utility on a Right of Way (as defined by M.G.L. c. 21E, s. 5(j))

☐ 4. Any Other Person Undertaking RAM

Specify Relationship: _____

H. REQUIRED ATTACHMENTS AND SUBMITTALS:

☐ 1. Check here if any Remediation Waste, generated as a result of this RAM, will be stored, treated, managed, recycled or reused at the site following submission of the Remedial Completion Statement. You must submit a Phase IV Remedy Implementation Plan along with the appropriate transmittal form (BWSC 08).

☐ 2. Check here if the Response Action(s) on which this opinion is based, if any, are (were) subject to any order(s), permit(s) and/or approval(s) issued by DEP or EPA. If the box is checked, you MUST attach a statement identifying the applicable provisions thereof.

☒ 3. Check here to certify that the Chief Municipal Officer and the Local Board of Health have been notified of the implementation of a Release Abatement Measure.

☐ 4. Check here if any non-updatable information provided on this form is incorrect, e.g. Release Address/Location Aid. Send corrections to bwsc.edep@state.ma.us.

☐ 5. If a RAM Compliance Fee is required for this RAM, check here to certify that a RAM Compliance Fee was submitted to DEP, P. O. Box 4062, Boston, MA 02211.

☒ 6. Check here to certify that the LSP Opinion containing the material facts, data, and other information is attached.



**RELEASE ABATEMENT MEASURE (RAM)
TRANSMITTAL FORM**

Release Tracking Number

3

- 23246

Pursuant to 310 CMR 40.0444 - 0446 (Subpart D)

I. CERTIFICATION OF PERSON UNDERTAKING RAM:

1. I, _____, attest under the pains and penalties of perjury (i) that I have personally examined and am familiar with the information contained in this submittal, including any and all documents accompanying this transmittal form, (ii) that, based on my inquiry of those individuals immediately responsible for obtaining the information, the material information contained in this submittal is, to the best of my knowledge and belief, true, accurate and complete, and (iii) that I am fully authorized to make this attestation on behalf of the entity legally responsible for this submittal. I/the person or entity on whose behalf this submittal is made am/is aware that there are significant penalties, including, but not limited to, possible fines and imprisonment, for willfully submitting false, inaccurate, or incomplete information.

2. By: _____ 3. Title: _____
(Signature)

4. For: RANDAL ISAAC 5. Date: _____
(Name of person or entity recorded in Section F) (mm/dd/yyyy)

☐ 6. Check here if the address of the person providing certification is different from address recorded in Section F.

7. Street: _____
8. City/Town: _____ 9. State: _____ 10. ZIP Code: _____
11. Telephone: _____ 12. Ext.: _____ 13. Email: _____

**YOU ARE SUBJECT TO AN ANNUAL COMPLIANCE ASSURANCE FEE OF UP TO \$10,000 PER
BILLABLE YEAR FOR THIS DISPOSAL SITE. YOU MUST LEGIBLY COMPLETE ALL RELEVANT
SECTIONS OF THIS FORM OR DEP MAY RETURN THE DOCUMENT AS INCOMPLETE. IF YOU SUBMIT AN INCOMPLETE FORM,
YOU MAY BE PENALIZED FOR MISSING A REQUIRED DEADLINE**

Date Stamp (DEP USE ONLY)



DRAFT COPY



ACTIVITY & USE LIMITATION (AUL) TRANSMITTAL FORM

Pursuant to 310 CMR 40.1056 & 40.1070 - 40.1084 (Subpart J)

Release Tracking Number

3 - 23246

A. DISPOSAL SITE LOCATION:

1. Disposal Site Name: 50 TUFTS ST & PROP ACROSS THE ST
2. Street Address: 50 TUFTS ST
3. City/Town: SOMERVILLE 4. ZIP Code: 021454129
- ☒ 5. Check here if the disposal site that is the source of the release is Tier Classified. Check the current Tier Classification Category.
- ☐ a. Tier I ☐ b. Tier ID ☒ c. Tier II

B. THIS FORM IS BEING USED TO: (check one)

- ☐ 1. Submit a Registry copy of a **Notice of Activity and Use Limitation**, pursuant to 310 CMR 40.1074.
- ☒ 2. Submit an **Evaluation of Changes in Land Uses/Activities and/or Site Conditions after a Permanent or Temporary Solution Statement** has been filed pursuant to 310 CMR 40.1080.
- ☐ 3. Submit a Registry copy of an **Amended Notice of Activity and Use Limitation**, pursuant to 310 CMR 40.1081.
- ☐ 4. Submit a Registry copy of a **Partial Termination of a Notice of Activity and Use Limitation**, pursuant to 310 CMR 40.1083(3).
- ☐ 5. Submit a Registry copy of a **Termination of a Notice of Activity and Use Limitation**, pursuant to 310 CMR 40.1083(1).
- ☐ 6. Submit a Registry copy of a **Grant of Environmental Restriction**, pursuant to 310 CMR 40.1071.
- ☐ 7. Submit a Registry copy of an **Amendment of a Grant of Environmental Restriction**, pursuant to 310 CMR 40.1081(3).
- ☐ 8. Submit a Registry copy of a **Partial Release of a Grant of Environmental Restriction**, pursuant to 310 CMR 40.1083(2).
- ☐ 9. Submit a Registry copy of a **Release of a Grant of Environmental Restriction**, pursuant to 310 CMR 40.1083(1)(d).
- ☐ 10. Submit a Registry copy of a **Confirmatory Activity and Use Limitation**, pursuant to 310 CMR 40.1085(4).
- ☐ 11. Submit a Registry copy of a **Deed, referencing a Notice of Activity and Use Limitation**, following the recording or registering of said deed conveying the record title for the property, pursuant to 310 CMR 40.1074(5). (Section D and H are not required).
12. Provide Additional RTNs:
- ☐ a. Check here if this AUL Submittal covers additional Release Tracking Numbers (RTNs).

b. Provide the additional Release Tracking Number(s) covered by this AUL Submittal.

- -

(All sections of this transmittal form must be filled out unless otherwise noted above)

C. AUL INFORMATION:

1. Document (per Section B) Recording and/or Registration Information:
- a. Name of Registry of Deeds and/or Land Registration Office: MIDDLESEX COUNTY REGISTRY OF DEEDS
- b. Book and Page Number and/or Document Number: 54007/227
- c. Date of recording and/or registration: 12/16/2009
mm/dd/yyyy
2. Is the address of the property subject to AUL different from the disposal site address listed above?
- ☐ a. No ☒ b. Yes If yes, then fill out address section below.
3. Street Address: 10 MORTON STREET
4. City/Town: SOMERVILLE 5. ZIP Code: 021450000



ACTIVITY & USE LIMITATION (AUL) TRANSMITTAL FORM

Pursuant to 310 CMR 40.1056 & 40.1070 - 40.1084 (Subpart J)

Release Tracking Number

3

- 23246

D. LSP SIGNATURE AND STAMP:

I attest under the pains and penalties of perjury that I have personally examined and am familiar with this transmittal form, including any and all documents accompanying this submittal. In my professional opinion and judgment based upon application of (i) the standard of care in 309 CMR 4.02(1), (ii) the applicable provisions of 309 CMR 4.02(2) and (3), and 309 CMR 4.03(2), and (iii) the provisions of 309 CMR 4.03(3), to the best of my knowledge, information and belief,

> if Section B indicates that a **Notice of Activity and Use Limitation** has been registered and/or recorded, the Activity and Use Limitation that is the subject of this submittal (i) is being provided in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000 and (ii) complies with 310 CMR 40.1074;

> if Section B indicates that an **Evaluation of Changes in Land Uses/Activities and/or Site Conditions after a Permanent or Temporary Solution** is being submitted, this evaluation was developed in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000 and (ii) complies with 310 CMR 40.1080;

> if Section B indicates that an **Amended Notice of Activity and Use Limitation or Amendment to a Grant of Environmental Restriction** has been registered and/or recorded, the Activity and Use Limitation that is the subject of this submittal (i) is being provided in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000 and (ii) complies with 40.1081;

> if Section B indicates that a **Termination or a Partial Termination of a Notice of Activity and Use Limitation, or a Release or Partial Release of a Grant of Environmental Restriction** has been registered and/or recorded, the Activity and Use Limitation that is the subject of this submittal (i) is being provided in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000 and (ii) complies with 310 CMR 40.1083;

> if Section B indicates that a **Grant of Environmental Restriction** has been registered and/or recorded, the Activity and Use Limitation that is the subject of this submittal (i) is being provided in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000 and (ii) complies with 310 CMR 40.1071;

> if Section B indicates that a **Confirmatory Activity and Use Limitation** has been registered and/or recorded, the Activity and Use Limitation that is the subject of this submittal (i) is being provided in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000 and (ii) complies with 310 CMR 40.1085(4);

I am aware that significant penalties may result, including, but not limited to, possible fines and imprisonment, if I submit information which I know to be false, inaccurate or materially incomplete.

1. LSP#: 9719

2. First Name: ILEENS

3. Last Name: GLADSTONE

4. Telephone: 7817214012

5. Ext.:

6. Email: igladstone@geiconsultants.com

7. Signature:

8. Date:

mm/dd/yyyy

9. LSP Stamp:





ACTIVITY & USE LIMITATION (AUL) TRANSMITTAL FORM

Pursuant to 310 CMR 40.1056 & 40.1070 - 40.1084 (Subpart J)

Release Tracking Number

3

- 23246

E. PERSON SUBMITTING AUL TRANSMITTAL FORM:

1. Check all that apply: ☐ a. change in contact name ☐ b. change of address ☒ c. change in the person undertaking response actions
2. Name of Organization: RANDAL ISAAC
3. Contact First Name: RANDAL 4. Last Name: ISSAC
5. Street: 10 MORTON STREET 6. Title: _____
7. City/Town: SOMERVILLE 8. State: MA 9. ZIP Code: 021450000
10. Telephone: 5104212003 11. Ext.: _____ 12. Email: randal_lane65@yahoo.com
13. Is the person described in this section the owner of the property?
- ☒ a. Yes ☐ b. No, if checked then Section H must be filled out by at least one owner unless submitting a Deed referencing a Notice of Activity and Use Limitation in accordance with 310 CMR 40.1074(4).
- ☐ c. Check here if providing names and addresses of any additional owners in an attachment.

F. RELATIONSHIP TO DISPOSAL SITE OF PERSON SUBMITTING AUL TRANSMITTAL FORM: (check one)

☐ Check here to change relationship

- ☒ 1. RP or PRP ☐ a. Owner ☐ b. Operator ☐ c. Generator ☐ d. Transporter
- ☒ e. Other RP or PRP Specify: ELIGIBLE PERSON
- ☐ 2. Fiduciary, Security Holder or Municipality with Exempt Status (as defined by M.G.L. c. 21E, s. 2)
- ☐ 3. Agency or Public Utility or a Right of Way (as defined by M.G.L. c. 21E, s. 5(j))
- ☐ 4. Any Other Person Submitting AUL Specify: _____



ACTIVITY & USE LIMITATION (AUL) TRANSMITTAL FORM

Pursuant to 310 CMR 40.1056 & 40.1070 - 40.1084 (Subpart J)

Release Tracking Number

3

- 23246

G. REQUIRED ATTACHMENT AND SUBMITTALS:

- ☐ 1. Check here to certify that notice of the proposed Activity and Use Limitation (AUL) was given to all record-interest holders, if any, via certified mail, in accordance with 310 CMR 40.1074(1)(d) or 310 CMR 40.1081(4)(c) for a Notice of AUL or Notice of Amended AUL .
- ☐ a. Check here if there were no record interest holders. b. Date of certified mailing: _____
mm/dd/yyyy
- ☐ c. Check here to certify that names and addresses of all record holders notified is attached.
- ☐ 2. Check here to certify that within 30 days of recording and/or registering the AUL, including amending, releasing or terminating the AUL, a copy of the AUL was/will be provided to the Chief Municipal Officer, the Board of Health, the Zoning Official, and the Building Code Enforcement Official in the community(ies) where the the property subject to such Activity and Use Limitation is located.
- ☐ 3. Check here to certify that within 30 days of recording and/or registering the AUL, including amending, releasing or terminating the AUL, a Legal Notice was/will be published in a newspaper with circulation in the community(ies) where the property subject to the AUL is located.
- ☐ 4. Check here to certify that within 7 days of publishing a Legal Notice in a newspaper with circulation in the community(ies) where the property subject to the AUL is located, a copy of the notice was/will be submitted to DEP.
- ☐ 5. If an AUL Compliance Fee is required for this AUL, check here to certify that an AUL Compliance Fee was submitted to DEP, P.O. Box 4062, Boston, MA 02211.
- ☐ 6. Check here if any non-updatable information provided on this form is incorrect, e.g. Site Address/Location Aid. Send corrections to bwsc.edep@state.ma.us.
- ☒ 7. Check here to certify that the LSP Opinion containing the material, facts, data, and other information is attached.

H. CERTIFICATION OF OWNER OF PROPERTY, IF NOT PERSON SUBMITTING AUL TRANSMITTAL FORM:

1. I, _____ attest under the pains and penalties of perjury that I am the owner of said property(ies), subject to the AUL
2. _____
Signature _____ Date: _____
mm/dd/yyyy
4. Name of Organization: _____
5. Contact First Name: _____ 6. Last Name: _____
7. Street: _____ 8. Title: _____
9. City/Town: _____ 10. State: _____ 11. ZIP Code: _____
12. Telephone: _____ 13. Ext.: _____ 14. Email: _____



ACTIVITY & USE LIMITATION (AUL) TRANSMITTAL FORM

Pursuant to 310 CMR 40.1056 & 40.1070 - 40.1084 (Subpart J)

Release Tracking Number

3

- 23246

I. CERTIFICATION OF PERSON MAKING SUBMITTAL:

1. I, _____, attest under the pains and penalties of perjury (i) that I have personally examined and am familiar with the information contained in this submittal, including any and all documents accompanying this transmittal form, (ii) that, based on my inquiry of those individuals immediately responsible for obtaining the information, the material information contained in this submittal is, to the best of my knowledge and belief, true, accurate and complete, and (iii) that I am fully authorized to make this attestation on behalf of the entity legally responsible for this submittal. I/the person or entity on whose behalf this submittal is made am/is aware that there are significant penalties, including, but not limited to, possible fines and imprisonment, for willfully submitting false, inaccurate, or incomplete information.

Pursuant to 310 CMR 40.1074 (1)(e), I also hereby certify under penalties of perjury, that either I (if person submitting the AUL Transmittal Form is the property owner), or

2. Name of Property Owner

am/is identified on the Notice of AUL as the owner of the property subject to the AUL, owned such property on the date that the AUL was recorded and /or registered

3. By: _____ 4. Title: _____

Signature

5. For: RANDAL ISAAC 6. Date: _____

(Name of person or entity recorded in Section E)

mm/dd/yyyy

☐ 7. Check here if the address of the person providing certification is different from address recorded in Section E.

8. Street: _____

9. City/Town: _____ 10. State: _____ 11. ZIP Code: _____

12. Telephone: _____ 13. Ext.: _____ 14. Email: _____

YOU ARE SUBJECT TO AN ANNUAL COMPLIANCE ASSURANCE FEE OF UP TO \$10,000 PER BILLABLE YEAR FOR THIS DISPOSAL SITE. YOU MUST LEGIBLY COMPLETE ALL RELEVANT SECTIONS OF THIS FORM OR DEP MAY RETURN THE DOCUMENT AS INCOMPLETE. IF YOU SUBMIT AN INCOMPLETE FORM, YOU MAY BE PENALIZED FOR MISSING A REQUIRED DEADLINE.

Date Stamp (DEP USE ONLY:)

Appendix B

Public Notice Letters

Consulting
Engineers and
Scientists

June 19, 2023
Project 045163

Mayor Katjana Ballantyne
Somerville City Hall
93 Highland Avenue
Somerville, MA 02143-1740

Dear Mayor Ballantyne:

**Re: Release Abatement Measure Plan
10 Morton Street
Somerville, Massachusetts
MassDEP RTN 3-23246**

On behalf of Randal and Adriana Isaac (The Homeowners) of Somerville, Massachusetts, GEI Consultants, Inc. is notifying your office that a Release Abatement Measure (RAM) Plan has been prepared for the portion of the 50 Tufts Street disposal site identified as 10 Morton Street in Somerville, Massachusetts.

The work includes installation of a robust waterproofing layer beneath the building during renovation of a residential building at 10 Morton Street in Somerville, Massachusetts. The work associated with the RAM is expected to begin in June 2023. Work is expected to be completed by summer 2023.

The RAM Plan is on file with the Massachusetts Department of Environmental Protection (MassDEP), Northeast Regional Office in Woburn, Massachusetts.

If you have any questions, please do not hesitate to contact me at 781-721-4012 or igladstone@geiconsultants.com.

Sincerely,

GEI CONSULTANTS, INC.



Ileen S. Gladstone, P.E., LSP, LEED AP
Senior Vice President



Christopher Coner, CHMM
Project Manager

MEF:jam

c: Randal Isaac, 10 Morton Street Homeowner
Catherine Malagrida, UniFirst Corporation

Consulting
Engineers and
Scientists

June 19, 2023
Project 045163

Ms. Karin Carroll
Director, Health Department
City Hall Annex
50 Evergreen Avenue
Somerville, MA 02145-2819

Dear Ms. Carroll:

**Re: Release Abatement Measure Plan
10 Morton Street
Somerville, Massachusetts
MassDEP RTN 3-23246**

On behalf of Randal and Adriana Isaac (The Homeowners) of Somerville, Massachusetts, GEI Consultants, Inc. is notifying your office that a Release Abatement Measure (RAM) Plan has been prepared for the portion of the 50 Tufts Street disposal site identified as 10 Morton Street in Somerville, Massachusetts.

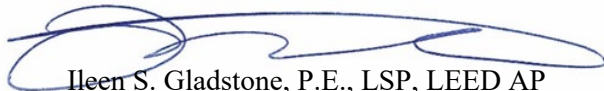
The work includes installation of a robust waterproofing layer beneath the building during renovation of a residential building at 10 Morton Street in Somerville, Massachusetts. The work associated with the RAM is expected to begin in June 2023. Work is expected to be completed by summer 2023.

The RAM Plan is on file with the Massachusetts Department of Environmental Protection (MassDEP), Northeast Regional Office in Woburn, Massachusetts.

If you have any questions, please do not hesitate to contact me at 781-721-4012 or igladstone@geiconsultants.com.

Sincerely,

GEI CONSULTANTS, INC.


Ileen S. Gladstone, P.E., LSP, LEED AP
Senior Vice President


Christopher Coner, CHMM
Project Manager

MEF:jam

c: Randal Isaac, 10 Morton Street Homeowner
Catherine Malagrida, UniFirst Corporation

Appendix C

Laboratory Data Reports

April 14, 2023

Chris Coner
GEI Consultants, Inc.- Woburn
400 Unicorn Park Drive
Woburn, MA 01801

Project Location: Somerville, MA
Client Job Number:
Project Number: 045163
Laboratory Work Order Number: 23D0007

Enclosed are results of analyses for samples as received by the laboratory on March 31, 2023. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Kaitlyn A. Feliciano
Project Manager

Table of Contents

Sample Summary	3
Case Narrative	4
Sample Results	5
Sample Preparation Information	9
QC Data	10
Air Toxics by EPA Compendium Methods	10
B336828	10
Flag/Qualifier Summary	11
Internal standard Area & RT Summary	12
Continuing Calibration Check	13
Certifications	14
Chain of Custody/Sample Receipt	15

GEI Consultants, Inc.- Woburn
400 Unicorn Park Drive
Woburn, MA 01801
ATTN: Chris Coner

REPORT DATE: 4/14/2023

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 045163

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 23D0007

The results of analyses performed on the following samples submitted to CON-TEST, a Pace Analytical Laboratory, are found in this report.

PROJECT LOCATION: Somerville,MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
045163-10Mort-SV1	23D0007-01	Soil Gas		EPA TO-15	
045163-10Mort-SV2	23D0007-02	Soil Gas		EPA TO-15	
045163-10Mort-SV3	23D0007-03	Soil Gas		EPA TO-15	
045163-10Mort-SV4	23D0007-04	Soil Gas		EPA TO-15	

CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

The results of analyses reported only relate to samples submitted to Con-Test, a Pace Analytical Laboratory, for testing.

I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.



Lisa A. Worthington
Technical Representative

ANALYTICAL RESULTS

Project Location: Somerville, MA
Date Received: 3/31/2023
Field Sample #: 045163-10Mort-SV1
Sample ID: 23D0007-01
Sample Matrix: Soil Gas
Sampled: 3/31/2023 10:54

Sample Description/Location:
Sub Description/Location:
Canister ID: 2383
Canister Size: 3 liter
Flow Controller ID: 4402
Sample Type: 1 hr

Work Order: 23D0007
Initial Vacuum(in Hg): -29
Final Vacuum(in Hg): -4.5
Receipt Vacuum(in Hg): -2.6
Flow Controller Type: Fixed-Orifice
Flow Controller Calibration
RPD Pre and Post-Sampling: <20%

EPA TO-15

Analyte	ppbv		Flag/Qual	ug/m3		Dilution	Date/Time		Analyst
	Results	RL		Results	RL		Analyzed		
1,1-Dichloroethane	ND	0.10		ND	0.40	2	4/10/23	21:55	CMR
1,1-Dichloroethylene	ND	0.10		ND	0.40	2	4/10/23	21:55	CMR
cis-1,2-Dichloroethylene	ND	0.10		ND	0.40	2	4/10/23	21:55	CMR
trans-1,2-Dichloroethylene	ND	0.10		ND	0.40	2	4/10/23	21:55	CMR
1,1,2,2-Tetrachloroethane	ND	0.10		ND	0.69	2	4/10/23	21:55	CMR
Tetrachloroethylene	ND	0.10		ND	0.68	2	4/10/23	21:55	CMR
1,1,1-Trichloroethane	ND	0.10		ND	0.55	2	4/10/23	21:55	CMR
1,1,2-Trichloroethane	ND	0.10		ND	0.55	2	4/10/23	21:55	CMR
Trichloroethylene	ND	0.10		ND	0.54	2	4/10/23	21:55	CMR
Vinyl Chloride	ND	0.10		ND	0.26	2	4/10/23	21:55	CMR

Surrogates	% Recovery	% REC Limits	
4-Bromofluorobenzene (1)	93.4	70-130	4/10/23 21:55

ANALYTICAL RESULTS

Project Location: Somerville, MA
Date Received: 3/31/2023
Field Sample #: 045163-10Mort-SV2
Sample ID: 23D0007-02
Sample Matrix: Soil Gas
Sampled: 3/31/2023 10:55

Sample Description/Location:
Sub Description/Location:
Canister ID: 2742
Canister Size: 3 liter
Flow Controller ID: 4403
Sample Type: 1 hr

Work Order: 23D0007
Initial Vacuum(in Hg): -30
Final Vacuum(in Hg): -4
Receipt Vacuum(in Hg): -2.2
Flow Controller Type: Fixed-Orifice
Flow Controller Calibration
RPD Pre and Post-Sampling: <20%

EPA TO-15

Analyte	ppbv		Flag/Qual	ug/m3		Dilution	Date/Time		Analyst
	Results	RL		Results	RL		Analyzed		
1,1-Dichloroethane	ND	0.10		ND	0.40	2	4/10/23	22:37	CMR
1,1-Dichloroethylene	ND	0.10		ND	0.40	2	4/10/23	22:37	CMR
cis-1,2-Dichloroethylene	ND	0.10		ND	0.40	2	4/10/23	22:37	CMR
trans-1,2-Dichloroethylene	ND	0.10		ND	0.40	2	4/10/23	22:37	CMR
1,1,2,2-Tetrachloroethane	ND	0.10		ND	0.69	2	4/10/23	22:37	CMR
Tetrachloroethylene	ND	0.10		ND	0.68	2	4/10/23	22:37	CMR
1,1,1-Trichloroethane	ND	0.10		ND	0.55	2	4/10/23	22:37	CMR
1,1,2-Trichloroethane	ND	0.10		ND	0.55	2	4/10/23	22:37	CMR
Trichloroethylene	ND	0.10		ND	0.54	2	4/10/23	22:37	CMR
Vinyl Chloride	ND	0.10		ND	0.26	2	4/10/23	22:37	CMR

Surrogates	% Recovery	% REC Limits	
4-Bromofluorobenzene (1)	92.8	70-130	4/10/23 22:37

ANALYTICAL RESULTS

Project Location: Somerville, MA
Date Received: 3/31/2023
Field Sample #: 045163-10Mort-SV3
Sample ID: 23D0007-03
Sample Matrix: Soil Gas
Sampled: 3/31/2023 10:56

Sample Description/Location:
Sub Description/Location:
Canister ID: 2750
Canister Size: 3 liter
Flow Controller ID: 4446
Sample Type: 1 hr

Work Order: 23D0007
Initial Vacuum(in Hg): -30
Final Vacuum(in Hg): -3.5
Receipt Vacuum(in Hg): -2.1
Flow Controller Type: Fixed-Orifice
Flow Controller Calibration
RPD Pre and Post-Sampling: <20%

EPA TO-15

Analyte	ppbv		Flag/Qual	ug/m3		Dilution	Date/Time		Analyst
	Results	RL		Results	RL		Analyzed		
1,1-Dichloroethane	ND	0.10		ND	0.40	2	4/11/23	0:01	CMR
1,1-Dichloroethylene	ND	0.10		ND	0.40	2	4/11/23	0:01	CMR
cis-1,2-Dichloroethylene	ND	0.10		ND	0.40	2	4/11/23	0:01	CMR
trans-1,2-Dichloroethylene	ND	0.10		ND	0.40	2	4/11/23	0:01	CMR
1,1,2,2-Tetrachloroethane	ND	0.10		ND	0.69	2	4/11/23	0:01	CMR
Tetrachloroethylene	ND	0.10		ND	0.68	2	4/11/23	0:01	CMR
1,1,1-Trichloroethane	ND	0.10		ND	0.55	2	4/11/23	0:01	CMR
1,1,2-Trichloroethane	ND	0.10		ND	0.55	2	4/11/23	0:01	CMR
Trichloroethylene	ND	0.10		ND	0.54	2	4/11/23	0:01	CMR
Vinyl Chloride	ND	0.10		ND	0.26	2	4/11/23	0:01	CMR

Surrogates	% Recovery	% REC Limits	
4-Bromofluorobenzene (1)	94.0	70-130	4/11/23 0:01

ANALYTICAL RESULTS

Project Location: Somerville, MA
Date Received: 3/31/2023
Field Sample #: 045163-10Mort-SV4
Sample ID: 23D0007-04
Sample Matrix: Soil Gas
Sampled: 3/31/2023 10:57

Sample Description/Location:
Sub Description/Location:
Canister ID: 2759
Canister Size: 3 liter
Flow Controller ID: 4417
Sample Type: 1 hr

Work Order: 23D0007
Initial Vacuum(in Hg): -30
Final Vacuum(in Hg): -4
Receipt Vacuum(in Hg): -2.4
Flow Controller Type: Fixed-Orifice
Flow Controller Calibration
RPD Pre and Post-Sampling: <20%

EPA TO-15

Analyte	ppbv		Flag/Qual	ug/m3		Dilution	Date/Time		Analyst
	Results	RL		Results	RL		Analyzed		
1,1-Dichloroethane	ND	0.10		ND	0.40	2	4/11/23 0:42	CMR	
1,1-Dichloroethylene	ND	0.10		ND	0.40	2	4/11/23 0:42	CMR	
cis-1,2-Dichloroethylene	ND	0.10		ND	0.40	2	4/11/23 0:42	CMR	
trans-1,2-Dichloroethylene	ND	0.10		ND	0.40	2	4/11/23 0:42	CMR	
1,1,2,2-Tetrachloroethane	ND	0.10		ND	0.69	2	4/11/23 0:42	CMR	
Tetrachloroethylene	ND	0.10		ND	0.68	2	4/11/23 0:42	CMR	
1,1,1-Trichloroethane	ND	0.10		ND	0.55	2	4/11/23 0:42	CMR	
1,1,2-Trichloroethane	ND	0.10		ND	0.55	2	4/11/23 0:42	CMR	
Trichloroethylene	ND	0.10		ND	0.54	2	4/11/23 0:42	CMR	
Vinyl Chloride	ND	0.10		ND	0.26	2	4/11/23 0:42	CMR	

Surrogates	% Recovery	% REC Limits	
4-Bromofluorobenzene (1)	92.7	70-130	4/11/23 0:42

Sample Extraction Data

Prep Method: TO-15 Prep Analytical Method: EP								
Lab Number [Field ID]	Batch	Pressure Dilution	Pre Dilution	Pre-Dil Initial mL	Pre-Dil Final mL	Default Injection mL	Actual Injection mL	Date
23D0007-01 [045163-10Mort-SV1]	B336828	1.5	1	N/A	1000	400	300	04/10/23
23D0007-02 [045163-10Mort-SV2]	B336828	1.5	1	N/A	1000	400	300	04/10/23
23D0007-03 [045163-10Mort-SV3]	B336828	1.5	1	N/A	1000	400	300	04/10/23
23D0007-04 [045163-10Mort-SV4]	B336828	1.5	1	N/A	1000	400	300	04/10/23

QUALITY CONTROL
Air Toxics by EPA Compendium Methods - Quality Control

Analyte	ppbv		ug/m3		Spike Level ppbv	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag/Qual
	Results	RL	Results	RL							

Batch B336828 - TO-15 Prep
Blank (B336828-BLK1)

Prepared & Analyzed: 04/10/23

1,1-Dichloroethane	ND	0.035
1,2-Dichloroethane	ND	0.035
cis-1,2-Dichloroethylene	ND	0.035
trans-1,2-Dichloroethylene	ND	0.035
1,1,2,2-Tetrachloroethane	ND	0.035
Tetrachloroethylene	ND	0.035
1,1,1-Trichloroethane	ND	0.035
1,1,2-Trichloroethane	ND	0.035
Vinyl Chloride	ND	0.035

Surrogate: 4-Bromofluorobenzene (1) 7.52 8.00 94.0 70-130

LCS (B336828-BS1)

Prepared & Analyzed: 04/10/23

1,1-Dichloroethane	4.83	5.00	96.6	70-130
1,2-Dichloroethane	4.96	5.00	99.1	70-130
cis-1,2-Dichloroethylene	5.06	5.00	101	70-130
trans-1,2-Dichloroethylene	5.05	5.00	101	70-130
1,1,2,2-Tetrachloroethane	4.78	5.00	95.6	70-130
Tetrachloroethylene	4.48	5.00	89.5	70-130
1,1,1-Trichloroethane	5.00	5.00	100	70-130
1,1,2-Trichloroethane	4.97	5.00	99.3	70-130
Vinyl Chloride	3.80	5.00	75.9	70-130

Surrogate: 4-Bromofluorobenzene (1) 7.69 8.00 96.1 70-130

Duplicate (B336828-DUP1)

Source: 23D0007-02

Prepared & Analyzed: 04/10/23

1,1-Dichloroethane	ND	0.10	ND	0.40	ND	25
1,2-Dichloroethane	ND	0.10	ND	0.40	ND	25
cis-1,2-Dichloroethylene	ND	0.10	ND	0.40	ND	25
trans-1,2-Dichloroethylene	ND	0.10	ND	0.40	ND	25
1,1,2,2-Tetrachloroethane	ND	0.10	ND	0.69	ND	25
Tetrachloroethylene	ND	0.10	ND	0.68	ND	25
1,1,1-Trichloroethane	ND	0.10	ND	0.55	ND	25
1,1,2-Trichloroethane	ND	0.10	ND	0.55	ND	25
Vinyl Chloride	ND	0.10	ND	0.26	ND	25

Surrogate: 4-Bromofluorobenzene (1) 7.41 8.00 92.6 70-130

FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
ND	Not Detected
RL	Reporting Limit is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
MCL	Maximum Contaminant Level
	Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
	No results have been blank subtracted unless specified in the case narrative section.

INTERNAL STANDARD AREA AND RT SUMMARY
EPA TO-15

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
045163-10Mort-SV1 (23D0007-01)			Lab File ID: G23A100015.D			Analyzed: 04/10/23 21:55			
Bromochloromethane (1)	1100488	8.301				60 - 140		+/-0.50	
1,4-Difluorobenzene (1)	2159816	10.069				60 - 140		+/-0.50	
Chlorobenzene-d5 (1)	1991027	14.434				60 - 140		+/-0.50	
045163-10Mort-SV2 (23D0007-02)			Lab File ID: G23A100016.D			Analyzed: 04/10/23 22:37			
Bromochloromethane (1)	1091279	8.301				60 - 140		+/-0.50	
1,4-Difluorobenzene (1)	2133496	10.069				60 - 140		+/-0.50	
Chlorobenzene-d5 (1)	1974802	14.434				60 - 140		+/-0.50	
045163-10Mort-SV3 (23D0007-03)			Lab File ID: G23A100018.D			Analyzed: 04/11/23 00:01			
Bromochloromethane (1)	1070530	8.301				60 - 140		+/-0.50	
1,4-Difluorobenzene (1)	2123151	10.069				60 - 140		+/-0.50	
Chlorobenzene-d5 (1)	1958805	14.434				60 - 140		+/-0.50	
045163-10Mort-SV4 (23D0007-04)			Lab File ID: G23A100019.D			Analyzed: 04/11/23 00:42			
Bromochloromethane (1)	1068878	8.301				60 - 140		+/-0.50	
1,4-Difluorobenzene (1)	2118397	10.069				60 - 140		+/-0.50	
Chlorobenzene-d5 (1)	1944099	14.434				60 - 140		+/-0.50	

CONTINUING CALIBRATION CHECK

COMPOUND	TYPE			RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CERTIFICATIONS
Certified Analyses included in this Report

Analyte	Certifications
<i>EPA TO-15 in Air</i>	
1,1-Dichloroethane	AIHA,FL,NJ,NY,ME,NH,VA
1,1-Dichloroethane	AIHA,FL,NJ,NY,ME,NH,VA
1,1-Dichloroethylene	AIHA,FL,NJ,NY,ME,NH,VA
1,1-Dichloroethylene	AIHA,FL,NJ,NY,ME,NH,VA
cis-1,2-Dichloroethylene	AIHA,FL,NY,ME,NH,VA
cis-1,2-Dichloroethylene	AIHA,FL,NY,ME,NH,VA
trans-1,2-Dichloroethylene	AIHA,NJ,NY,ME,NH,VA
trans-1,2-Dichloroethylene	AIHA,NJ,NY,ME,NH,VA
1,1,2,2-Tetrachloroethane	AIHA,FL,NJ,NY,ME,NH,VA
1,1,2,2-Tetrachloroethane	AIHA,FL,NJ,NY,ME,NH,VA
Tetrachloroethylene	AIHA,FL,NJ,NY,ME,NH,VA
Tetrachloroethylene	AIHA,FL,NJ,NY,ME,NH,VA
1,1,1-Trichloroethane	AIHA,FL,NJ,NY,ME,NH,VA
1,1,1-Trichloroethane	AIHA,FL,NJ,NY,ME,NH,VA
1,1,2-Trichloroethane	AIHA,FL,NJ,NY,ME,NH,VA
1,1,2-Trichloroethane	AIHA,FL,NJ,NY,ME,NH,VA
1,1,2-Trichloroethane	AIHA,FL,NJ,NY,ME,NH,VA
Trichloroethylene	AIHA,FL,NJ,NY,ME,NH,VA
Trichloroethylene	AIHA,FL,NJ,NY,ME,NH,VA
Vinyl Chloride	AIHA,FL,NJ,NY,ME,NH,VA
Vinyl Chloride	AIHA,FL,NJ,NY,ME,NH,VA

Con-Test, a Pace Environmental Laboratory, operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO 17025:2017	100033	03/1/2024
NY	New York State Department of Health	10899 NELAP	04/1/2024
NH	New Hampshire Environmental Lab	2516 NELAP	02/5/2024
NJ	New Jersey DEP	MA007 NELAP	06/30/2023
FL	Florida Department of Health	E871027 NELAP	06/30/2023
ME	State of Maine	MA00100	06/9/2023
VA	Commonwealth of Virginia	460217	12/14/2023

Tufts Street IA/SV Analyte List

- Vinyl chloride
- 1,1-Dichloroethene
- trans-1,2-Dichloroethane
- 1,1-Dichloroethane
- cis-1,2-Dichloroethene
- 1,1,1-Trichloroethane
- Trichloroethene
- 1,1,2-Trichloroethane
- Tetrachloroethene
- 1,1,2,2-Tetrachloroethane

LAB NAME: Con-Test

LAB PICK-UP DATE: 3/31

PROJECT NAME: Tuffz 3+

PROJECT NUMBER: 045163

NUMBER OF BOTTLES 24 air cans

COOLER 1 OF 1
→ box

39 Spruce St.
East Longmeadow, MA. 01028
P: 413-525-2332
F: 413-525-6405
www.pacelabs.com

Log In Back-Sheet

Login Sample Receipt Checklist – (Rejection Criteria Listing
– Using Acceptance Policy) Any False statement will be
brought to the attention of the Client – True or False



Client GEI CONSULTANTS
Project TUFTS ST
MCP/RCP Required MCP
Deliverable Package Requirement —
Location Somerville, MA
PWSID# (When Applicable) _____
Arrival Method COURIER
Received By / Date / Time MEM 3-31-23 1730
Back-Sheet By / Date / Time TPH 4-3-23 1015
Temperature Method _____ # _____
Temp < 6° C ☐ Actual Temperature _____
Rush Samples: Yes ☒ No _____ Notify _____
Short Hold: Yes ☒ No _____ Notify _____

	True	False
Received on Ice	☐	☒
Received in Cooler	☐	☒
Custody Seal: DATE TIME	☐	☒
COC Relinquished	☒	☐
COC/Samples Labels Agree	☒	☐
All Samples in Good Condition	☒	☐
Samples Received within Holding Time	☒	☐
Is there enough Volume	☒	☐
Proper Media/Container Used	☒	☐
Individually Certified Cans	☐	☒
Trip Blanks	☐	☒
COC Legible	☒	☐
COC Included: (Check all included)		
Client ☒	Analysis ☒	Sampler Name ☒
Project ☒	IDs ☒	Collection Date/Time ☒

Notes regarding Samples/COC outside of SOP:

Container	#	Size	Regulator	Duration	Accessories		
Summa Cans	4	3L	4	1hr	Nut/Ferrule		IC Train
Tedlar Bags					Tubing		
TO-17 Tubes					T-Connector		Shipping Charges
Radiello					Syringe		
Pufs/ TO-11					Tedlar		

Can #'s	8	16	24	Reg's #'s	8	16	24
1 2383	9	17	25	1 4402	9	17	25
2 2742	10	18	26	2 4403	10	18	26
3 2750	11	19	27	3 4446	11	19	27
4 2759	12	20	28	4 4417	12	20	28
5	13	21	29	5	13	21	29
6	14	22	30	6	14	22	30
7	15	23	31	7	15	23	31
Unused Media	8	16	24	Pufs/TO-17's	8	16	24
1	9	17	25	1	9	17	25
2	10	18	26	2	10	18	26
3	11	19	27	3	11	19	27
4	12	20	28	4	12	20	28
5	13	21	29	5	13	21	29
6	14	22	30	6	14	22	30
7	15	23	31	7	15	23	31



Air Sampling Media Certificate of Analysis

Date Analyzed: 3/22/2023 Batch #: 23CC0234

Certification Type: Batch Certified ☒ Individual Certified ☐

Media Type: Summa Canister ☒ Flow Controllers ☐

Media IDs: BC2383

Note: Two ID's grouped together, for example BC2136/BC3145, represents matched pairs of certified summa canisters and flow controllers.

Units: PPBv

<0.80	Propene	<0.04	Vinyl acetate	<0.02	Dibromchloromethane
<0.02	Dichlorodifluoromethane	<0.20	Hexane	<0.02	1,2-Dibromomethane
<0.04	Chloromethane	<0.02	Ethyl acetate	<0.02	Tetrachloroethylene
<0.02	Freon 114	<0.02	Chloroform	<0.02	Chlorobenzene
<0.02	Vinyl chloride	<0.02	Tetrahydrofuran	<0.02	Ethylbenzene
<0.02	1,3-Butadiene	<0.02	1,2-Dichloroethane	<0.04	m,p-Xylenes
<0.02	Bromomethane	<0.02	1,1,1-Trichloroethane	<0.02	Bromoform
<0.02	Chloroethane	<0.02	Benzene	<0.02	Styrene
<0.08	Acrolein	<0.02	Carbon Tetrachloride	<0.02	o-Xylene
<0.80	Acetone	<0.02	Cyclohexane	<0.02	1,1,2,2-Tetrachloroethane
<0.20	Trichlorofluoromethane	<0.02	1,2-Dichloropropane	<0.02	4-Ethyltoluene
<0.80	Ethanol	<0.02	Bromodichloromethane	<0.02	1,3,5-Trimethylbenzene
<0.02	1,1-Dichloroethylene	<0.02	Trichloroethylene	<0.02	1,2,4-Trimethylbenzene
<0.20	Methylene chloride	<0.02	1,4-Dioxane	<0.02	1,3-Dichlorobenzene
<0.20	Freon 113	<0.02	Methylmethacrylate	<0.02	Benzyl chloride
<0.2	Carbon disulfide	<0.02	Heptane	<0.02	1,4-Dichlorobenzene
<0.02	t-1,2-Dichloroethylene	<0.02	MIBK	<0.02	1,2-Dichlorobenzene
<0.02	1,1-Dichloroethane	<0.02	c-1,3-Dichloropropylene	<0.04	1,2,4-Trichlorobenzene
<0.02	MTBE	<0.02	t-1,3-Dichloropropylene	<0.02	Naphthalene
<0.80	IPA	<0.02	1,1,2-Trichloroethylene	<0.02	Hexachlorobutadiene
<0.20	2-Butanone (MEK)	<0.02	Toluene		
<0.02	c-1,2-Dichloroethylene	<0.02	2-Hexanone (MBK)		

Special Notes: _____

Analyst Initials/Date: CMR 4/13/23



Air Sampling Media Certificate of Analysis

Date Analyzed: 3/10/2023 Batch #: 23CC0193

Certification Type: Batch Certified ☒ Individual Certified ☐

Media Type: Summa Canister ☒ Flow Controllers ☐

Media IDs:	BC2742		
	BC2750		
	BC2759		

Note: Two ID's grouped together, for example BC2136/BC3145, represents matched pairs of certified summa canisters and flow controllers.

Units: PPBv

<0.80	Propene	<0.04	Vinyl acetate	<0.02	Dibromchloromethane
<0.02	Dichlorodifluoromethane	<0.20	Hexane	<0.02	1,2-Dibromomethane
<0.04	Chloromethane	<0.02	Ethyl acetate	<0.02	Tetrachloroethylene
<0.02	Freon 114	<0.02	Chloroform	<0.02	Chlorobenzene
<0.02	Vinyl chloride	<0.02	Tetrahydrofuran	<0.02	Ethylbenzene
<0.02	1,3-Butadiene	<0.02	1,2-Dichloroethane	<0.04	m,p-Xylenes
<0.02	Bromomethane	<0.02	1,1,1-Trichloroethane	<0.02	Bromoform
<0.02	Chloroethane	<0.02	Benzene	<0.02	Styrene
<0.08	Acrolein	<0.02	Carbon Tetrachloride	<0.02	o-Xylene
<0.80	Acetone	<0.02	Cyclohexane	<0.02	1,1,2,2-Tetrachloroethane
<0.20	Trichlorofluoromethane	<0.02	1,2-Dichloropropane	<0.02	4-Ethyltoluene
<0.80	Ethanol	<0.02	Bromodichloromethane	<0.02	1,3,5-Trimethylbenzene
<0.02	1,1-Dichloroethylene	<0.02	Trichloroethylene	<0.02	1,2,4-Trimethylbenzene
<0.20	Methylene chloride	<0.02	1,4-Dioxane	<0.02	1,3-Dichlorobenzene
<0.20	Freon 113	<0.02	Methylmethacrylate	<0.02	Benzyl chloride
<0.2	Carbon disulfide	<0.02	Heptane	<0.02	1,4-Dichlorobenzene
<0.02	t-1,2-Dichloroethylene	<0.02	MIBK	<0.02	1,2-Dichlorobenzene
<0.02	1,1-Dichloroethane	<0.02	c-1,3-Dichloropropylene	<0.04	1,2,4-Trichlorobenzene
<0.02	MTBE	<0.02	t-1,3-Dichloropropylene	<0.02	Naphthalene
<0.80	IPA	<0.02	1,1,2-Trichloroethylene	<0.02	Hexachlorobutadiene
<0.20	2-Butanone (MEK)	<0.02	Toluene		
<0.02	c-1,2-Dichloroethylene	<0.02	2-Hexanone (MBK)		

Special Notes:

Analyst Initials/Date: CMR 4/13/23

MADEP MCP Analytical Method Report Certification Form

Laboratory Name: Pace New England	Project #: 23D0007
Project Location: Somerville, MA	RTN:

This Form provides certifications for the following data set: [list Laboratory Sample ID Number(s)]

23D0007-01 thru 23D0007-04

Matrices: Air

CAM Protocol (check all that below)

8260 VOC CAM II A ()	7470/7471 Hg CAM IIIB ()	MassDEP VPH (GC/PID/FID) CAM IV A ()	8082 PCB CAM V A ()	9014 Total Cyanide/PAC CAM VI A ()	6860 Perchlorate CAM VIII B ()
8270 SVOC CAM II B ()	7010 Metals CAM III C ()	MassDEP VPH (GC/MS) CAM IV C ()	8081 Pesticides CAM V B ()	7196 Hex Cr CAM VI B ()	MassDEP APH CAM IX A ()
6010 Metals CAM III A ()	6020 Metals CAM III D ()	MassDEP EPH CAM IV B ()	8151 Herbicides CAM V C ()	8330 Explosives CAM VIII A ()	TO-15 VOC CAM IX B (X)

Affirmative response to Questions A through F is required for "Presumptive Certainty" status

A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	☒ Yes ☐ No ¹
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	☒ Yes ☐ No ¹
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	☒ Yes ☐ No ¹
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data?	☒ Yes ☐ No ¹
E a	VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications).	☐ Yes ☐ No ¹
E b	APH and TO-15 Methods only: Was the complete analyte list reported for each method?	☐ Yes ☒ No ¹
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all No responses to Questions A through E)?	☒ Yes ☐ No ¹

A response to questions G, H and I below is required for "Presumptive Certainty" status

G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	☒ Yes ☐ No ¹
----------	---	--

Data User Note: Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.

H	Were all QC performance standards specified in the CAM protocol(s) achieved?	☒ Yes ☐ No ¹
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	☐ Yes ☒ No ¹

¹ All Negative responses must be addressed in an attached Environmental Laboratory case narrative.

I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.

Signature: <u>Lisa Worthington</u>	Position: <u>Technical Representative</u>
Printed Name: <u>Lisa A. Worthington</u>	Date: <u>04/14/23</u>

CERTIFICATE OF ANALYSIS

Chris Coner
GEI Consultants, Inc.
400 Unicorn Park Drive
Woburn, MA 01801

RE: Tufts Street (045163)
ESS Laboratory Work Order Number: 23F0033

This signed Certificate of Analysis is our approved release of your analytical results. These results are only representative of sample aliquots received at the laboratory. ESS Laboratory expects its clients to follow all regulatory sampling guidelines. Beginning with this page, the entire report has been paginated. This report should not be copied except in full without the approval of the laboratory. Samples will be disposed of thirty days after the final report has been delivered. If you have any questions or concerns, please feel free to call our Customer Service Department.



Laurel Stoddard
Laboratory Director

REVIEWED*By ESS Laboratory at 2:07 pm, Jun 09, 2023***Analytical Summary**

The project as described above has been analyzed in accordance with the ESS Quality Assurance Plan. This plan utilizes the following methodologies: US EPA SW-846, US EPA Methods for Chemical Analysis of Water and Wastes per 40 CFR Part 136, APHA Standard Methods for the Examination of Water and Wastewater, American Society for Testing and Materials (ASTM), and other recognized methodologies. The analyses with these noted observations are in conformance to the Quality Assurance Plan. In chromatographic analysis, manual integration is frequently used instead of automated integration because it produces more accurate results.

The test results present in this report are in compliance with TNI and relative state standards, and/or client Quality Assurance Project Plans (QAPP). The laboratory has reviewed the following: Sample Preservations, Hold Times, Initial Calibrations, Continuing Calibrations, Method Blanks, Blank Spikes, Blank Spike Duplicates, Duplicates, Matrix Spikes, Matrix Spike Duplicates, Surrogates and Internal Standards. Any results which were found to be outside of the recommended ranges stated in our SOPs will be noted in the Project Narrative.



CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Tufts Street

ESS Laboratory Work Order: 23F0033

SAMPLE RECEIPT

The following samples were received on June 01, 2023 for the analyses specified on the enclosed Chain of Custody Record.

To achieve CAM compliance for MCP data, ESS Laboratory has reviewed all QA/QC Requirements and Performance Standards listed in each method. Holding times and preservation have also been reviewed. All CAM requirements have been performed and achieved unless noted in the project narrative.

Each method has been set-up in the laboratory to reach required MCP standards. The methods for aqueous VOA and Soil Methanol VOA have known limitations for certain analytes. The regulatory standards may not be achieved due to these limitations. In addition, for all methods, matrix interferences, dilutions, and %Solids may elevate method reporting limits above regulatory standards. ESS Laboratory can provide, upon request, a Limit Checker (regulatory standard comparison spreadsheet) electronic deliverable which will highlight these exceedances.

Question I: All samples for VOCs were analyzed for a subset of the required MCP list per the client's request.

Lab Number	Sample Name	Matrix	Analysis
23F0033-01	045163-10MORT-DISP	Soil	8260B



CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Tufts Street

ESS Laboratory Work Order: 23F0033

PROJECT NARRATIVE

5035/8260B Volatile Organic Compounds / Methanol

D3F0038-CCV1 [Calibration required quadratic regression \(Q\).](#)

1,2,3-Trichlorobenzene (101% @ 80-120%), 1,2,4-Trichlorobenzene (110% @ 80-120%)

No other observations noted.

End of Project Narrative.

DATA USABILITY LINKS

To ensure you are viewing the most current version of the documents below, please clear your internet cookies for www.ESSLaboratory.com. Consult your IT Support personnel for information on how to clear your internet cookies.

[Definitions of Quality Control Parameters](#)

[Semivolatile Organics Internal Standard Information](#)

[Semivolatile Organics Surrogate Information](#)

[Volatile Organics Internal Standard Information](#)

[Volatile Organics Surrogate Information](#)

[EPH and VPH Alkane Lists](#)



CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Tufts Street

ESS Laboratory Work Order: 23F0033

CURRENT SW-846 METHODOLOGY VERSIONS

Analytical Methods

1010A - Flashpoint
6010C - ICP
6020A - ICP MS
7010 - Graphite Furnace
7196A - Hexavalent Chromium
7470A - Aqueous Mercury
7471B - Solid Mercury
8011 - EDB/DBCP/TCP
8015C - GRO/DRO
8081B - Pesticides
8082A - PCB
8100M - TPH
8151A - Herbicides
8260B - VOA
8270D - SVOA
8270D SIM - SVOA Low Level
9014 - Cyanide
9038 - Sulfate
9040C - Aqueous pH
9045D - Solid pH (Corrosivity)
9050A - Specific Conductance
9056A - Anions (IC)
9060A - TOC
9095B - Paint Filter
MADEP 04-1.1 - EPH
MADEP 18-2.1 - VPH

Prep Methods

3005A - Aqueous ICP Digestion
3020A - Aqueous Graphite Furnace / ICP MS Digestion
3050B - Solid ICP / Graphite Furnace / ICP MS Digestion
3060A - Solid Hexavalent Chromium Digestion
3510C - Separatory Funnel Extraction
3520C - Liquid / Liquid Extraction
3540C - Manual Soxhlet Extraction
3541 - Automated Soxhlet Extraction
3546 - Microwave Extraction
3580A - Waste Dilution
5030B - Aqueous Purge and Trap
5030C - Aqueous Purge and Trap
5035A - Solid Purge and Trap

SW846 Reactivity Methods 7.3.3.2 (Reactive Cyanide) and 7.3.4.1 (Reactive Sulfide) have been withdrawn by EPA. These methods are reported per client request and are not NELAP accredited.



CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Tufts Street

ESS Laboratory Work Order: 23F0033

MassDEP Analytical Protocol Certification Form

MADEP RTN: _____

This form provides certification for the following data set: **23F0033-01**

Matrices: ☐ Ground Water/Surface Water ☒ Soil/Sediment ☐ Drinking Water ☐ Air ☐ Other: _____

CAM Protocol (check all that apply below):

- | | | | | | |
|--|--|--|---|--|---|
| ☒ 8260 VOC
CAM II A | ☐ 7470/7471 Hg
CAM III B | ☐ MassDEP VPH
(GC/PID/FID)
CAM IV A | ☐ 8082 PCB
CAM V A | ☐ 9014 Total
Cyanide/PAC
CAM VI A | ☐ 6860 Perchlorate
CAM VIII B |
| ☐ 8270 SVOC
CAM II B | ☐ 7010 Metals
CAM III C | ☐ MassDEP VPH
(GC/MS)
CAM IV C | ☐ 8081 Pesticides
CAM V B | ☐ 7196 Hex Cr
CAM VI B | ☐ MassDEP APH
CAM IX A |
| ☐ 6010 Metals
CAM III A | ☐ 6020 Metals
CAM III D | ☐ MassDEP EPH
CAM IV B | ☐ 8151 Herbicides
CAM V C | ☐ Explosives
CAM VIII A | ☐ TO-15 VOC
CAM IX B |

Affirmative responses to questions A through F are required for "Presumptive Certainty" status

- | | | |
|---|--|---|
| A | Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times? | Yes ☒ No ☐ |
| B | Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed? | Yes ☒ No ☐ |
| C | Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances? | Yes ☒ No ☐ |
| D | Does the laboratory report comply with all the reporting requirements specified in the CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"? | Yes ☒ No ☐ |
| E | VPH, EPH, APH and TO-15 only: a. Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications).
b. APH and TO-15 Methods only: Was the complete analyte list reported for each method? | Yes ☐ No ☐ |
| F | Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)? | Yes ☒ No ☐ |

Responses to Questions G, H and I below are required for "Presumptive Certainty" status

- | | | |
|---|--|---|
| G | Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocols(s)?
Data User Note: Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350. | Yes ☒ No ☐ * |
| H | Were all QC performance standards specified in the CAM protocol(s) achieved? | Yes ☒ No ☐ * |
| I | Were results reported for the complete analyte list specified in the selected CAM protocol(s)? | Yes ☐ No ☒ * |

***All negative responses must be addressed in an attached laboratory narrative.**

I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.

Signature: Laurel Stoddard

Printed Name: Laurel Stoddard

Date: June 09, 2023

Position: Laboratory Director



CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.

Client Project ID: Tufts Street

Client Sample ID: 045163-10MORT-DISP

Date Sampled: 05/31/23 10:30

Percent Solids: N/A

Initial Volume: 7.5g

Final Volume: 15ml

Extraction Method: 5035

ESS Laboratory Work Order: 23F0033

ESS Laboratory Sample ID: 23F0033-01

Sample Matrix: Soil

Units: mg/kg wet

Analyst: MD

5035/8260B Volatile Organic Compounds / Methanol

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
1,1,1,2-Tetrachloroethane	ND (0.400)		8260B		1	06/02/23 11:56	D3F0038	DF30217
1,1,1-Trichloroethane	ND (0.400)		8260B		1	06/02/23 11:56	D3F0038	DF30217
1,1,2,2-Tetrachloroethane	ND (0.400)		8260B		1	06/02/23 11:56	D3F0038	DF30217
1,1,2-Trichloroethane	ND (0.400)		8260B		1	06/02/23 11:56	D3F0038	DF30217
1,1-Dichloroethane	ND (0.400)		8260B		1	06/02/23 11:56	D3F0038	DF30217
1,1-Dichloroethene	ND (0.400)		8260B		1	06/02/23 11:56	D3F0038	DF30217
1,1-Dichloropropene	ND (0.400)		8260B		1	06/02/23 11:56	D3F0038	DF30217
1,2,3-Trichlorobenzene	ND (0.400)		8260B		1	06/02/23 11:56	D3F0038	DF30217
1,2,3-Trichloropropane	ND (0.400)		8260B		1	06/02/23 11:56	D3F0038	DF30217
1,2,4-Trichlorobenzene	ND (0.400)		8260B		1	06/02/23 11:56	D3F0038	DF30217
1,2-Dibromo-3-Chloropropane	ND (2.00)		8260B		1	06/02/23 11:56	D3F0038	DF30217
1,2-Dichlorobenzene	ND (0.400)		8260B		1	06/02/23 11:56	D3F0038	DF30217
1,2-Dichloroethane	ND (0.400)		8260B		1	06/02/23 11:56	D3F0038	DF30217
1,2-Dichloropropane	ND (0.400)		8260B		1	06/02/23 11:56	D3F0038	DF30217
1,3-Dichlorobenzene	ND (0.400)		8260B		1	06/02/23 11:56	D3F0038	DF30217
1,3-Dichloropropane	ND (0.400)		8260B		1	06/02/23 11:56	D3F0038	DF30217
1,4-Dichlorobenzene	ND (0.400)		8260B		1	06/02/23 11:56	D3F0038	DF30217
2,2-Dichloropropane	ND (0.400)		8260B		1	06/02/23 11:56	D3F0038	DF30217
2-Chlorotoluene	ND (0.400)		8260B		1	06/02/23 11:56	D3F0038	DF30217
4-Chlorotoluene	ND (0.400)		8260B		1	06/02/23 11:56	D3F0038	DF30217
Bromochloromethane	ND (0.400)		8260B		1	06/02/23 11:56	D3F0038	DF30217
Bromodichloromethane	ND (0.400)		8260B		1	06/02/23 11:56	D3F0038	DF30217
Chlorobenzene	ND (0.400)		8260B		1	06/02/23 11:56	D3F0038	DF30217
Chloroethane	ND (0.400)		8260B		1	06/02/23 11:56	D3F0038	DF30217
Chloroform	ND (0.400)		8260B		1	06/02/23 11:56	D3F0038	DF30217
Chloromethane	ND (0.400)		8260B		1	06/02/23 11:56	D3F0038	DF30217
cis-1,2-Dichloroethene	ND (0.400)		8260B		1	06/02/23 11:56	D3F0038	DF30217
cis-1,3-Dichloropropene	ND (0.400)		8260B		1	06/02/23 11:56	D3F0038	DF30217
Dibromochloromethane	ND (0.400)		8260B		1	06/02/23 11:56	D3F0038	DF30217
Dichlorodifluoromethane	ND (0.400)		8260B		1	06/02/23 11:56	D3F0038	DF30217
Hexachlorobutadiene	ND (0.400)		8260B		1	06/02/23 11:56	D3F0038	DF30217
Methylene Chloride	ND (0.800)		8260B		1	06/02/23 11:56	D3F0038	DF30217



CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Tufts Street
Client Sample ID: 045163-10MORT-DISP
Date Sampled: 05/31/23 10:30
Percent Solids: N/A
Initial Volume: 7.5g
Final Volume: 15ml
Extraction Method: 5035

ESS Laboratory Work Order: 23F0033
ESS Laboratory Sample ID: 23F0033-01
Sample Matrix: Soil
Units: mg/kg wet
Analyst: MD

5035/8260B Volatile Organic Compounds / Methanol

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
Tetrachloroethene	ND (0.400)		8260B		1	06/02/23 11:56	D3F0038	DF30217
trans-1,2-Dichloroethene	ND (0.400)		8260B		1	06/02/23 11:56	D3F0038	DF30217
trans-1,3-Dichloropropene	ND (0.400)		8260B		1	06/02/23 11:56	D3F0038	DF30217
Trichloroethene	ND (0.400)		8260B		1	06/02/23 11:56	D3F0038	DF30217
Trichlorofluoromethane	ND (0.400)		8260B		1	06/02/23 11:56	D3F0038	DF30217
Vinyl Chloride	ND (0.400)		8260B		1	06/02/23 11:56	D3F0038	DF30217

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Surrogate: 1,2-Dichloroethane-d4</i>	103 %		70-130
<i>Surrogate: 4-Bromofluorobenzene</i>	104 %		70-130
<i>Surrogate: Dibromofluoromethane</i>	106 %		70-130
<i>Surrogate: Toluene-d8</i>	106 %		70-130



CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Tufts Street

ESS Laboratory Work Order: 23F0033

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
---------	--------	-----	-------	-------------	---------------	------	-------------	-----	-----------	-----------

5035/8260B Volatile Organic Compounds / Methanol

Batch DF30217 - 5035

Blank

1,1,1,2-Tetrachloroethane	ND	0.200	mg/kg wet							
1,1,1-Trichloroethane	ND	0.200	mg/kg wet							
1,1,2,2-Tetrachloroethane	ND	0.200	mg/kg wet							
1,1,2-Trichloroethane	ND	0.200	mg/kg wet							
1,1-Dichloroethane	ND	0.200	mg/kg wet							
1,1-Dichloroethene	ND	0.200	mg/kg wet							
1,1-Dichloropropene	ND	0.200	mg/kg wet							
1,2,3-Trichlorobenzene	ND	0.200	mg/kg wet							
1,2,3-Trichloropropane	ND	0.200	mg/kg wet							
1,2,4-Trichlorobenzene	ND	0.200	mg/kg wet							
1,2-Dibromo-3-Chloropropane	ND	1.00	mg/kg wet							
1,2-Dichlorobenzene	ND	0.200	mg/kg wet							
1,2-Dichloroethane	ND	0.200	mg/kg wet							
1,2-Dichloropropane	ND	0.200	mg/kg wet							
1,3-Dichlorobenzene	ND	0.200	mg/kg wet							
1,3-Dichloropropane	ND	0.200	mg/kg wet							
1,4-Dichlorobenzene	ND	0.200	mg/kg wet							
2,2-Dichloropropane	ND	0.200	mg/kg wet							
2-Chlorotoluene	ND	0.200	mg/kg wet							
4-Chlorotoluene	ND	0.200	mg/kg wet							
Bromochloromethane	ND	0.200	mg/kg wet							
Bromodichloromethane	ND	0.200	mg/kg wet							
Chlorobenzene	ND	0.200	mg/kg wet							
Chloroethane	ND	0.200	mg/kg wet							
Chloroform	ND	0.200	mg/kg wet							
Chloromethane	ND	0.200	mg/kg wet							
cis-1,2-Dichloroethene	ND	0.200	mg/kg wet							
cis-1,3-Dichloropropene	ND	0.200	mg/kg wet							
Dibromochloromethane	ND	0.200	mg/kg wet							
Dichlorodifluoromethane	ND	0.200	mg/kg wet							
Hexachlorobutadiene	ND	0.200	mg/kg wet							
Methylene Chloride	ND	0.400	mg/kg wet							
Tetrachloroethene	ND	0.200	mg/kg wet							
trans-1,2-Dichloroethene	ND	0.200	mg/kg wet							
trans-1,3-Dichloropropene	ND	0.200	mg/kg wet							
Trichloroethene	ND	0.200	mg/kg wet							
Trichlorofluoromethane	ND	0.200	mg/kg wet							
Vinyl Chloride	ND	0.200	mg/kg wet							
Surrogate: 1,2-Dichloroethane-d4	4.87		mg/kg wet	5.000		97	70-130			
Surrogate: 4-Bromofluorobenzene	5.00		mg/kg wet	5.000		100	70-130			
Surrogate: Dibromofluoromethane	4.99		mg/kg wet	5.000		100	70-130			
Surrogate: Toluene-d8	5.02		mg/kg wet	5.000		100	70-130			

LCS

1,1,1,2-Tetrachloroethane	1.97	0.200	mg/kg wet	2.000		98	70-130			
---------------------------	------	-------	-----------	-------	--	----	--------	--	--	--



CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Tufts Street

ESS Laboratory Work Order: 23F0033

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
---------	--------	-----	-------	-------------	---------------	------	-------------	-----	-----------	-----------

5035/8260B Volatile Organic Compounds / Methanol

Batch DF30217 - 5035

1,1,1-Trichloroethane	1.88	0.200	mg/kg wet	2.000		94	70-130			
1,1,2,2-Tetrachloroethane	1.93	0.200	mg/kg wet	2.000		97	70-130			
1,1,2-Trichloroethane	1.90	0.200	mg/kg wet	2.000		95	70-130			
1,1-Dichloroethane	1.89	0.200	mg/kg wet	2.000		94	70-130			
1,1-Dichloroethene	1.83	0.200	mg/kg wet	2.000		91	70-130			
1,1-Dichloropropene	1.96	0.200	mg/kg wet	2.000		98	70-130			
1,2,3-Trichlorobenzene	1.81	0.200	mg/kg wet	2.000		91	70-130			
1,2,3-Trichloropropane	1.85	0.200	mg/kg wet	2.000		93	70-130			
1,2,4-Trichlorobenzene	1.88	0.200	mg/kg wet	2.000		94	70-130			
1,2-Dibromo-3-Chloropropane	1.68	1.00	mg/kg wet	2.000		84	70-130			
1,2-Dichlorobenzene	1.91	0.200	mg/kg wet	2.000		96	70-130			
1,2-Dichloroethane	1.89	0.200	mg/kg wet	2.000		95	70-130			
1,2-Dichloropropane	1.91	0.200	mg/kg wet	2.000		96	70-130			
1,3-Dichlorobenzene	1.89	0.200	mg/kg wet	2.000		94	70-130			
1,3-Dichloropropane	2.02	0.200	mg/kg wet	2.000		101	70-130			
1,4-Dichlorobenzene	2.03	0.200	mg/kg wet	2.000		102	70-130			
2,2-Dichloropropane	1.93	0.200	mg/kg wet	2.000		96	70-130			
2-Chlorotoluene	1.94	0.200	mg/kg wet	2.000		97	70-130			
4-Chlorotoluene	1.94	0.200	mg/kg wet	2.000		97	70-130			
Bromochloromethane	1.91	0.200	mg/kg wet	2.000		96	70-130			
Bromodichloromethane	1.93	0.200	mg/kg wet	2.000		96	70-130			
Chlorobenzene	1.87	0.200	mg/kg wet	2.000		93	70-130			
Chloroethane	2.03	0.200	mg/kg wet	2.000		102	70-130			
Chloroform	1.92	0.200	mg/kg wet	2.000		96	70-130			
Chloromethane	1.68	0.200	mg/kg wet	2.000		84	70-130			
cis-1,2-Dichloroethene	1.95	0.200	mg/kg wet	2.000		97	70-130			
cis-1,3-Dichloropropene	1.86	0.200	mg/kg wet	2.000		93	70-130			
Dibromochloromethane	1.88	0.200	mg/kg wet	2.000		94	70-130			
Dichlorodifluoromethane	1.60	0.200	mg/kg wet	2.000		80	70-130			
Hexachlorobutadiene	1.89	0.200	mg/kg wet	2.000		94	70-130			
Methylene Chloride	1.93	0.400	mg/kg wet	2.000		96	70-130			
Tetrachloroethene	1.82	0.200	mg/kg wet	2.000		91	70-130			
trans-1,2-Dichloroethene	1.95	0.200	mg/kg wet	2.000		98	70-130			
trans-1,3-Dichloropropene	1.70	0.200	mg/kg wet	2.000		85	70-130			
Trichloroethene	1.93	0.200	mg/kg wet	2.000		96	70-130			
Trichlorofluoromethane	1.80	0.200	mg/kg wet	2.000		90	70-130			
Vinyl Chloride	1.97	0.200	mg/kg wet	2.000		99	70-130			
Surrogate: 1,2-Dichloroethane-d4	4.97		mg/kg wet	5.000		99	70-130			
Surrogate: 4-Bromofluorobenzene	4.93		mg/kg wet	5.000		99	70-130			
Surrogate: Dibromofluoromethane	4.94		mg/kg wet	5.000		99	70-130			
Surrogate: Toluene-d8	4.97		mg/kg wet	5.000		99	70-130			

LCS Dup

1,1,1,2-Tetrachloroethane	1.98	0.200	mg/kg wet	2.000		99	70-130	0.6	25	
1,1,1-Trichloroethane	1.88	0.200	mg/kg wet	2.000		94	70-130	0.1	25	
1,1,1,2-Tetrachloroethane	1.93	0.200	mg/kg wet	2.000		97	70-130	0.1	25	



CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Tufts Street

ESS Laboratory Work Order: 23F0033

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
---------	--------	-----	-------	-------------	---------------	------	-------------	-----	-----------	-----------

5035/8260B Volatile Organic Compounds / Methanol

Batch DF30217 - 5035

1,1,2-Trichloroethane	1.92	0.200	mg/kg wet	2.000		96	70-130	1	25	
1,1-Dichloroethane	1.89	0.200	mg/kg wet	2.000		95	70-130	0.3	25	
1,1-Dichloroethene	1.85	0.200	mg/kg wet	2.000		92	70-130	1	25	
1,1-Dichloropropene	1.98	0.200	mg/kg wet	2.000		99	70-130	1	25	
1,2,3-Trichlorobenzene	1.78	0.200	mg/kg wet	2.000		89	70-130	2	25	
1,2,3-Trichloropropane	1.86	0.200	mg/kg wet	2.000		93	70-130	0.3	25	
1,2,4-Trichlorobenzene	1.91	0.200	mg/kg wet	2.000		95	70-130	1	25	
1,2-Dibromo-3-Chloropropane	1.68	1.00	mg/kg wet	2.000		84	70-130	0	25	
1,2-Dichlorobenzene	1.92	0.200	mg/kg wet	2.000		96	70-130	0.4	25	
1,2-Dichloroethane	1.86	0.200	mg/kg wet	2.000		93	70-130	2	25	
1,2-Dichloropropane	1.90	0.200	mg/kg wet	2.000		95	70-130	0.3	25	
1,3-Dichlorobenzene	1.91	0.200	mg/kg wet	2.000		95	70-130	0.9	25	
1,3-Dichloropropane	2.00	0.200	mg/kg wet	2.000		100	70-130	1	25	
1,4-Dichlorobenzene	2.01	0.200	mg/kg wet	2.000		100	70-130	1	25	
2,2-Dichloropropane	1.92	0.200	mg/kg wet	2.000		96	70-130	0.4	25	
2-Chlorotoluene	1.96	0.200	mg/kg wet	2.000		98	70-130	0.8	25	
4-Chlorotoluene	1.93	0.200	mg/kg wet	2.000		96	70-130	0.5	25	
Bromochloromethane	1.86	0.200	mg/kg wet	2.000		93	70-130	3	25	
Bromodichloromethane	1.92	0.200	mg/kg wet	2.000		96	70-130	0.1	25	
Chlorobenzene	1.87	0.200	mg/kg wet	2.000		94	70-130	0.3	25	
Chloroethane	2.00	0.200	mg/kg wet	2.000		100	70-130	2	25	
Chloroform	1.89	0.200	mg/kg wet	2.000		94	70-130	1	25	
Chloromethane	1.70	0.200	mg/kg wet	2.000		85	70-130	0.7	25	
cis-1,2-Dichloroethene	1.88	0.200	mg/kg wet	2.000		94	70-130	4	25	
cis-1,3-Dichloropropene	1.84	0.200	mg/kg wet	2.000		92	70-130	1	25	
Dibromochloromethane	1.87	0.200	mg/kg wet	2.000		94	70-130	0.5	25	
Dichlorodifluoromethane	1.70	0.200	mg/kg wet	2.000		85	70-130	6	25	
Hexachlorobutadiene	2.00	0.200	mg/kg wet	2.000		100	70-130	6	25	
Methylene Chloride	1.94	0.400	mg/kg wet	2.000		97	70-130	0.5	25	
Tetrachloroethene	1.89	0.200	mg/kg wet	2.000		95	70-130	4	25	
trans-1,2-Dichloroethene	1.99	0.200	mg/kg wet	2.000		100	70-130	2	25	
trans-1,3-Dichloropropene	1.68	0.200	mg/kg wet	2.000		84	70-130	1	25	
Trichloroethene	1.91	0.200	mg/kg wet	2.000		95	70-130	1	25	
Trichlorofluoromethane	1.86	0.200	mg/kg wet	2.000		93	70-130	3	25	
Vinyl Chloride	1.96	0.200	mg/kg wet	2.000		98	70-130	0.7	25	
Surrogate: 1,2-Dichloroethane-d4	4.97		mg/kg wet	5.000		99	70-130			
Surrogate: 4-Bromofluorobenzene	4.95		mg/kg wet	5.000		99	70-130			
Surrogate: Dibromofluoromethane	4.92		mg/kg wet	5.000		98	70-130			
Surrogate: Toluene-d8	4.97		mg/kg wet	5.000		99	70-130			



CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Tufts Street

ESS Laboratory Work Order: 23F0033

Notes and Definitions

U	Analyte included in the analysis, but not detected
Q	Calibration required quadratic regression (Q).
ND	Analyte NOT DETECTED at or above the MRL (LOQ), LOD for DoD Reports, MDL for J-Flagged Analytes
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
MDL	Method Detection Limit
MRL	Method Reporting Limit
LOD	Limit of Detection
LOQ	Limit of Quantitation
DL	Detection Limit
I/V	Initial Volume
F/V	Final Volume
§	Subcontracted analysis; see attached report
1	Range result excludes concentrations of surrogates and/or internal standards eluting in that range.
2	Range result excludes concentrations of target analytes eluting in that range.
3	Range result excludes the concentration of the C9-C10 aromatic range.
Avg	Results reported as a mathematical average.
NR	No Recovery
[CALC]	Calculated Analyte
SUB	Subcontracted analysis; see attached report
RL	Reporting Limit
EDL	Estimated Detection Limit
MF	Membrane Filtration
MPN	Most Probable Number
TNTC	Too numerous to Count
CFU	Colony Forming Units



CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Tufts Street

ESS Laboratory Work Order: 23F0033

ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS

ENVIRONMENTAL

Rhode Island Potable and Non Potable Water: LAI00179

<http://www.health.ri.gov/find/labs/analytical/ESS.pdf>

Connecticut Potable and Non Potable Water, Solid and Hazardous Waste: PH-0750

http://www.ct.gov/dph/lib/dph/environmental_health/environmental_laboratories/pdf/OutOfStateCommercialLaboratories.pdf

Maine Potable and Non Potable Water, and Solid and Hazardous Waste: RI00002

<http://www.maine.gov/dhhs/meedc/environmental-health/dwp/partners/labCert.shtml>

Massachusetts Potable and Non Potable Water: M-RI002

<http://public.dep.state.ma.us/Labcert/Labcert.aspx>

New Hampshire (NELAP accredited) Potable and Non Potable Water, Solid and Hazardous Waste: 2424

<http://des.nh.gov/organization/divisions/water/dwgb/nhelap/index.htm>

New York (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: 11313

<http://www.wadsworth.org/labcert/elap/comm.html>

New Jersey (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: RI006

http://datamine2.state.nj.us/DEP_OPRA/OpraMain/pi_main?mode=pi_by_site&sort_order=PI_NAMEA&Select+a+Site:=58715

Pennsylvania: 68-01752

<http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx>

ESS Laboratory Sample and Cooler Receipt Checklist

Client: GEI Consultants, Inc. - TB
 Shipped/Delivered Via: ESS Courier

ESS Project ID: 23F0033
 Date Received: 6/1/2023
 Project Due Date: 6/8/2023
 Days for Project: 5 Day

1. Air bill manifest present? ☐ No
 Air No.: NA
2. Were custody seals present? ☐ No
3. Is radiation count <100 CPM? ☐ Yes
4. Is a Cooler Present? ☐ Yes
 Temp: 1.4 Iced with: Ice
5. Was COC signed and dated by client? ☐ Yes

6. Does COC match bottles? ☐ Yes
7. Is COC complete and correct? ☐ Yes
8. Were samples received intact? ☐ Yes
9. Were labs informed about short holds & rushes? Yes / No NA
10. Were any analyses received outside of hold time? Yes / No

11. Any Subcontracting needed? Yes / No
 ESS Sample IDs: _____
 Analysis: _____
 TAT: _____

12. Were VOAs received? Yes / No
 a. Air bubbles in aqueous VOAs? Yes / No
 b. Does methanol cover soil completely? Yes / No / NA

13. Are the samples properly preserved? Yes / No
 a. If metals preserved upon receipt: Date: _____ Time: _____ By/Acid Lot#: _____
 b. Low Level VOA vials frozen: Date: _____ Time: _____ By: _____

Sample Receiving Notes:

Did not receive jar for % solids

14. Was there a need to contact Project Manager? Yes / No
 a. Was there a need to contact the client? Yes / No
 Who was contacted? Molly Forrest Date: 6/5/23 Time: _____ By: ML

Resolution: report without % solids

Sample Number	Container ID	Proper Container	Air Bubbles Present	Sufficient Volume	Container Type	Preservative	Record pH (Cyanide and 608 Pesticides)
1	437250	Yes	N/A	Yes	VOA Vial	MeOH	

2nd Review

Were all containers scanned into storage/lab?

Are barcode labels on correct containers?

Are all Flashpoint stickers attached/container ID # circled?

Are all Hex Chrome stickers attached?

Are all QC stickers attached?

Are VOA stickers attached if bubbles noted?

Initials [Signature]
Yes / No
 Yes / No / NA
 Yes / No / NA
 Yes / No / NA
 Yes / No / NA

Completed By: [Signature] Date & Time: 6/1/23 1842
 Reviewed By: [Signature] Date & Time: 6/1/23 1848

Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility

EPA 624/624.1: m/p-xylene, o-xylene, Naphthalene

EPA 625/625.1: alpha-Terpineol

EPA 8260C/8260D: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.

EPA 8270D/8270E: NPW: Dimethylnaphthalene, 1,4-Diphenylhydrazine, alpha-Terpineol; SCM: Dimethylnaphthalene, 1,4-Diphenylhydrazine.

SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO₂, NO₃.

Mansfield Facility

SM 2540D: TSS

EPA 8082A: NPW: PCB: 1, 5, 31, 87, 101, 110, 141, 151, 153, 180, 183, 187.

EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene,

3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.

Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water

EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2:** Nitrate-N, Nitrite-N; **SM4500NO3-F:** Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE,**

EPA 180.1, SM2130B, SM4500CI-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B

EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.

Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT, SM9222D.**

Non-Potable Water

SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1:** Ammonia-N, **LACHAT 10-107-06-1-B:** Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2:** Nitrate-N, **SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300:** Chloride, Sulfate, Nitrate.

EPA 624.1: Volatile Halocarbons & Aromatics,

EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs

EPA 625.1: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045:** PCB-Oil.

Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603, SM9222D.**

Mansfield Facility:

Drinking Water

EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1 Hg.**

EPA 522, EPA 537.1.

Non-Potable Water

EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.

EPA 200.8: Al, Sb, As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.

EPA 245.1 Hg.

SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

Tufts Street IA/SV Analyte List

- Vinyl chloride
- 1,1-Dichloroethene
- trans-1,2-Dichloroethane
- 1,1-Dichloroethane
- cis-1,2-Dichloroethene
- 1,1,1-Trichloroethane
- Trichloroethene
- 1,1,2-Trichloroethane
- Tetrachloroethene
- 1,1,2,2-Tetrachloroethane

Alpha Analytical, Inc.Facility: **Company-wide**Department: **Quality Assurance**Title: **Certificate/Approval Program Summary**ID No.: **17873**

Revision 19

Published Date: 4/2/2021 1:14:23 PM

Page 1 of 1

Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility**EPA 624/624.1:** m/p-xylene, o-xylene, Naphthalene**EPA 625/625.1:** alpha-Terpineol**EPA 8260C/8260D:** NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.**EPA 8270D/8270E:** NPW: Dimethylnaphthalene, 1,4-Diphenylhydrazine, alpha-Terpineol; SCM: Dimethylnaphthalene, 1,4-Diphenylhydrazine.**SM4500:** NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO₂, NO₃.**Mansfield Facility****SM 2540D:** TSS**EPA 8082A:** NPW: PCB: 1, 5, 31, 87, 101, 110, 141, 151, 153, 180, 183, 187.**EPA TO-15:** Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene,

3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.

Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:**Drinking Water****EPA 300.0:** Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2:** Nitrate-N, Nitrite-N; **SM4500NO3-F:** Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE,****EPA 180.1, SM2130B, SM4500CI-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B****EPA 332:** Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.**Microbiology:** **SM9215B; SM9223-P/A, SM9223B-Colilert-QT, SM9222D.****Non-Potable Water****SM4500H-B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH:** Ammonia-N and Kjeldahl-N, **EPA 350.1:**Ammonia-N, **LACHAT 10-107-06-1-B:** Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2:** Nitrate-N, **SM4500P-E, SM4500P-B, E, SM4500SO4-E,****SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300:** Chloride, Sulfate, Nitrate.**EPA 624.1:** Volatile Halocarbons & Aromatics,**EPA 608.3:** Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II,

Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs

EPA 625.1: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045:** PCB-Oil.**Microbiology:** **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603, SM9222D.****Mansfield Facility:****Drinking Water****EPA 200.7:** Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1 Hg.****EPA 522, EPA 537.1.****Non-Potable Water****EPA 200.7:** Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.**EPA 200.8:** Al, Sb, As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.**EPA 245.1 Hg.****SM2340B**

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

